TECHNOLOGY DEPT.

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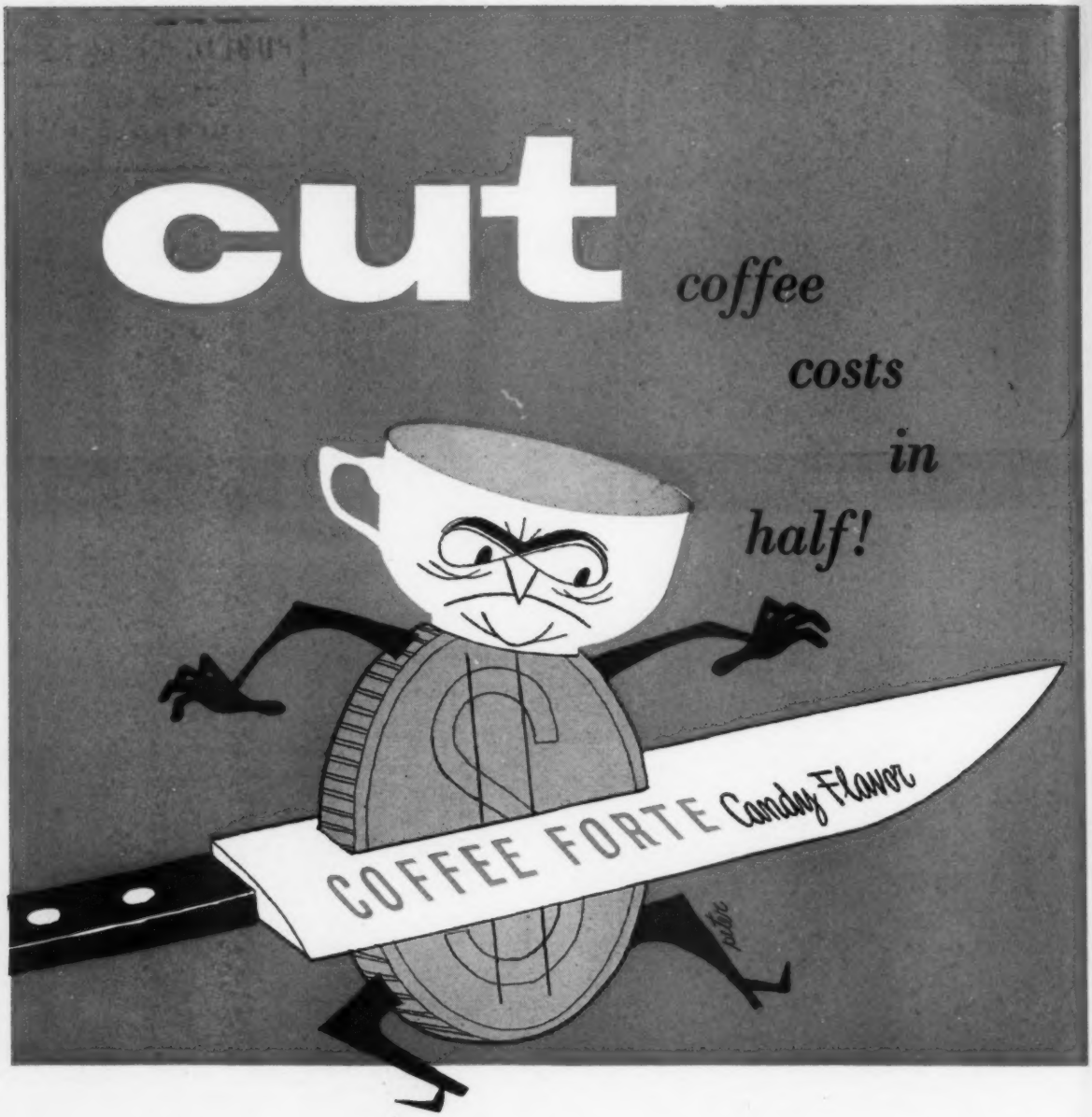
)NEER SPECIALIZED PUBLICATION FOR CONFECTIONERY MANUFACTURERS

OCTOBER 1951

The Art of Making Panned Confections
Leading National Confectionery Advertisers
How To Control Dust Hazards in Your Plant
Unique Packaging Builds a National Business



This headline is not just a trick claim to induce you to read further. It's a proved fact . . . *proved day-in and day-out by candy manufacturers everywhere!* COFFEE FORTE actually cuts coffee costs in half, yet gives candies a rich, cup-of-coffee *aroma*, as well as the full-bodied *flavor* that creates repeat sales! *You save 50% because* COFFEE FORTE *is double-strength!* You'd actually need twice as much pure dry instantly soluble coffee to build up the same degree of flavor. *Yet* COFFEE FORTE costs no more! Write, wire, phone . . . we'll tell you all about it!

AMERICAN FOOD FLAVORS
For Cream Centers
& Hard Candies

VANILLA EXTRACTS
(Pure & Concentrated)
FRUIT FLAVORS
COFFEE FORTE

AMERICAN FOOD LABORATORIES, INC.

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Lovely . . .

But practical too!

By any taste test an Alva flavor usually comes out on top! . . . Yet flavor is not its only attribute. Alva flavors are "product planned" specifically to do the job best in the particular product for which they are recommended.

Send for your sample of the new

ALVA GRAPE AND CHERRY

new imitation flavors .. perfection in flavor and particularly designed for candy use.

Write for the big complete ALVA catalog and see ALVA Flavors' complete line in every quality, strength and price class.

VAN AMERINGEN-HAEBLER, INC.
521 WEST 57th STREET
NEW YORK 19, N. Y.

• ALVA FLAVORS • ALVA FLAVORS • ALVA FLAVORS •

OH, MAN!

WHAT A FLAVOR!

It doesn't matter much
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That's one of the advantages of using
FRITZSCHE flavors in your confections.
We don't make just one or two flavors
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Compare them critically and you'll find
that every single one
is of the same superlative character as the next,
and in quality, strength and in-the-batch performance,
they exhibit remarkable uniformity.
This comforting dependability of our products,
regardless of the flavor involved,
is why manufacturers and the buyers
for so many important brands
prefer to specify FRITZSCHE . . . .
A FIRST NAME IN FLAVORS SINCE 1871.

For complete listing of our flavoring specialties for candy write for "FLAVORS by FRITZSCHE"

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The Manufacturing Confectioner

READ WHEREVER CANDY IS MADE

OCTOBER 1951
Vol. XXXI No. 10

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COVER: Sectional view of the pan department in the new Sierra Candy factory, San Francisco (see page 54).

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Pioneer Specialized Publication for Confectionery Manufacturers Plant Management, Production methods, Materials, Equipment, Purchasing Sales, Merchandising.

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You, too, will find them reliable, economical producers of repeat business.

Outstanding formula using NU-KREME

We recommend that you try NU-KREME, the finest nougat cream on the market, for Whipped Cream Hand Rolls. We suggest the following formula:
Place in a kettle 30 lbs. of Sugar, 1 gallon of water and 1 teaspoon of Cream of Tartar. Cook to 244 degrees. Cream up cold with 8 lbs. of NU-KREME. Add Salt and Vanilla on beater while creaming. Hand roll and dip in Chocolate.

NU-KREME Grade A of all Nougat Creams.
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Formula Book "RECIPES FOR BETTER CANDIES" sent with initial order

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A Letter from the Editor

London

ENGLAND is far from the country of shortages I had anticipated. There are shortages, especially in meats, but one can live comfortably here. The Ministry of Food allowed me coupons for three pounds of confections, which amply filled my "sweet" needs while here.

Mr. Harold Clark, president of D. L. Clark Co., Pittsburgh, was travelling to Bristol, for an International Conference on Management, on board the Mauretania and we visited, as all candy men do when they meet.

The president of the International Advertising Conference of Britain is the Rt. Hon. Lord Mackintosh of Halifax, whom our industry knows well, especially concerning his famous confections. It was a privilege to chat with him briefly about the industry and his firm's American associates. Lord Mackintosh is a leader in business and advertising circles in England.

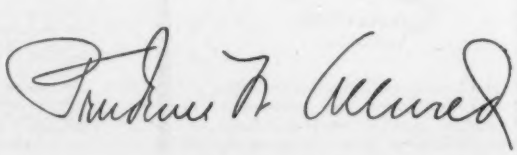
Candy counters here are well stacked and the sales girls busy. Six ounces of candy a week are allowed on ration and will shortly be increased another half-ounce. The desire of consumers to use all ration stamps undoubtedly keeps consumption steady and higher than if there were no rationing. The per capita consumption is higher than in the United States.

Confectionery manufacturers in Britain all belong to an association. Competition is keen between brands. Selfridges' department store had a non-ration section in their candy department stocked with popcorn (covered with syrup), glace fruits, nuts and, of course, cakes and cookies. There were few pound boxes, as one can readily understand.

Mr. A. E. Wright, candy buyer for Mark & Spencer, which controls a group of about 245 stores in Britain, took me for a tour of their testing laboratories. Sanitation is stressed, also the adherence to standards for products. Their stores are among the largest buyers of candy in this country. They sell a great deal of cellophane wrapped candy in bags, with a complete line including small boxes of chocolates especially packaged for them.

Those I met among the manufacturers were most helpful in making my visit instructive as well as pleasant. Mr. Lawrence Pascall, managing director of James Pascall, Ltd., was particularly helpful as were Mr. Goddard, well known among machinery buyers, and Mr. R. M. Reade, who has been with some of the large manufacturers and now represents The MANUFACTURING CONFECTIONER in Great Britain.

Time did not permit visits to many of our British friends who have called on us in the United States.



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OIL OF
ORANGE
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180 Varick Street, New York 14, N. Y.

Distributors for:
CALIFORNIA FRUIT GROWERS EXCHANGE
PRODUCTS DEPARTMENT, ONTARIO, CALIF.

Producing Plant:
The Exchange Orange Products Co., Ontario, Calif.

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BE SURE TO INCLUDE CANDY BUYERS' DIRECTORY IN YOUR ADVERTISING BUDGET FOR FALL!

No medium offers you as complete coverage of your market, over as long a period of time, for so little money* . . . . . .

Write us to save your space for December, 1951.

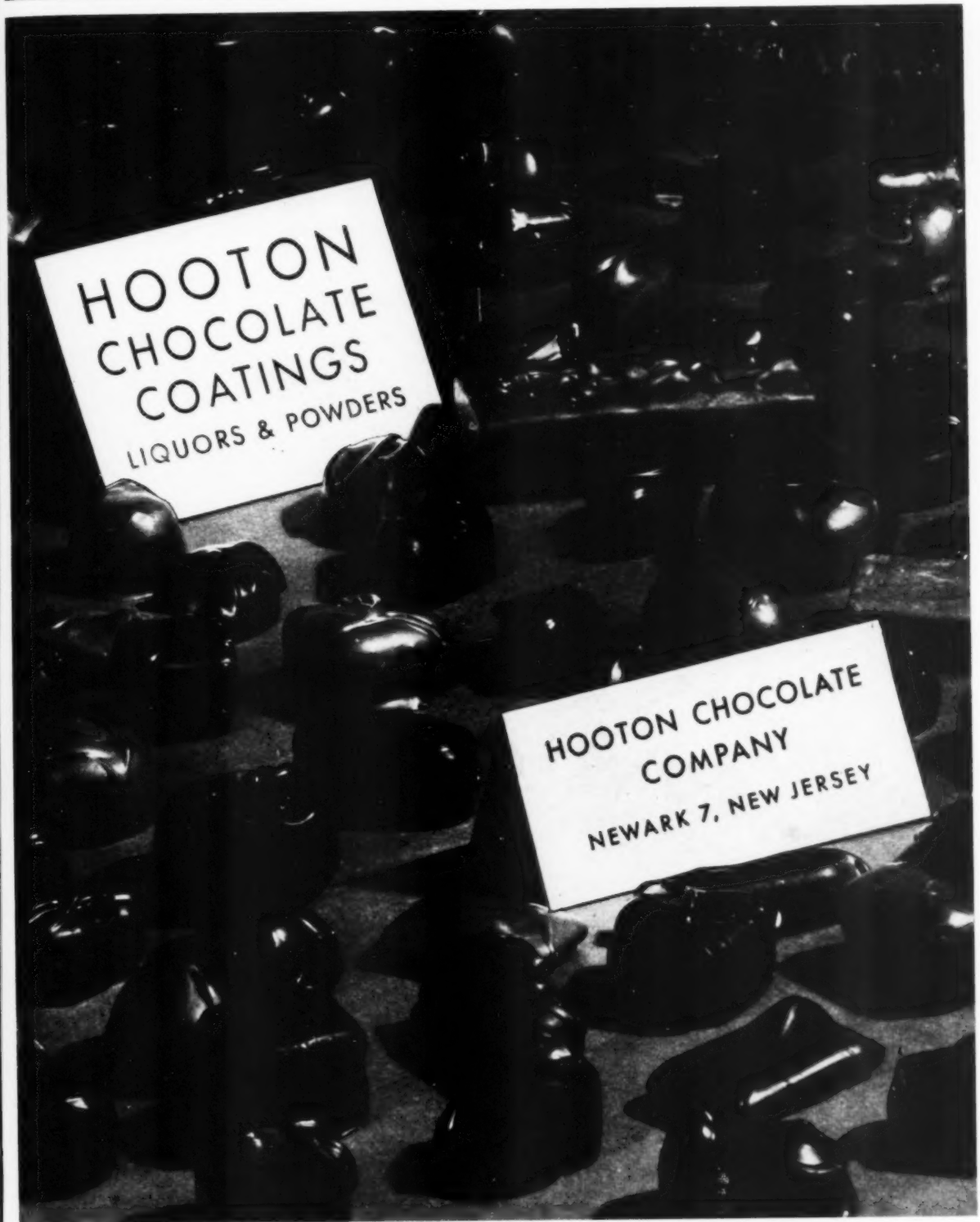
CANDY MERCHANDISING

Publishers of THE MANUFACTURING CONFECTIONER

9 S. Clinton :: :: Chicago 6, Ill.

*In the hands of more than 8,000 wholesale candy buyers for a whole year—and only ONE advertising insertion to pay for!

for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NEWARK 7, NEW JERSEY

THE Standard

Exchange

CITRUS PECTIN *for* CONFECTIONERS

WIRE OR WRITE FOR SAMPLES AND FORMULAS

Candy is Delicious Food
ENJOY SOME EVERY DAY!

CALIFORNIA FRUIT GROWERS EXCHANGE

400 W. Madison Street, Chicago 6, Ill.

PRODUCTS DEPARTMENT
ONTARIO, CALIFORNIA

99 Hudson Street, New York 13, N. Y.

USED BY LEADING CANDY MANUFACTURERS THROUGHOUT THE WORLD

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lak's frutal
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lak's frutal

superior fruit flavors

polak's frutal works, middletown, n. y.

represented in all principal cities
in the United States
and throughout the world

ESSENTIAL OILS
PERFUME BASES
AROMATIC CHEMICALS

What candies sell best in Illinois?

Midwest metropolis! The Chicago skyline seen from a lake shore vantage point

"ALMOND CANDIES same as everywhere!"

In Illinois, fabulous Chicago is noted for many things . . . including candy manufacturing. Famous-name candies are shipped from Chicago throughout the world . . . and a large percentage of these candies feature the magic word "almonds" on the label. There's good reason, of course. The public preference for almond candies is well known, and it just makes sense to capitalize on the sales appeal of crisp, sweet almonds.

It makes sense, too, that the candy-makers' favorite almonds are California's finest "Blue Diamonds". In chopt or slivered, natural or blanched, you get the world's finest almonds under the Blue Diamond label. Exclusive photo-electric sorting equipment plus careful hand picking minimize handling costs in your plant.

Prices are favorable, supplies dependable, quality always high So let's talk almonds. *Let's talk about selling more candy!*

BLUE DIAMOND ALMONDS

BLUE DIAMOND BRAND

CALIFORNIA ALMOND GROWERS EXCHANGE ...Sacramento, Calif.
Sales Offices: 100 Hudson St., New York 13, and 221 N. La Salle, Chicago 1

good flavor is the best wrapper in the world

Sure, the outside wrapper should be attractive, colorful, arresting . . . but make doubly sure that GOOD FLAVOR, QUALITY FLAVOR is the **basic** ingredient of your candy. An outside wrapper does not create **repeat sales**—but good flavor does!

For **remembrance value,** for **repeat sales,** for **climbing sales** look to D & O Flavors . . . The best wrapper in the world for your candy.

DODGE & OLCOTT, INC.

180 Varick Street • New York 14, N. Y.

ATLANTA·BOSTON·CHICAGO·CINCINNATI·DALLAS·LOS ANGELES·PHILADELPHIA·ST. LOUIS·SAN FRANCISCO

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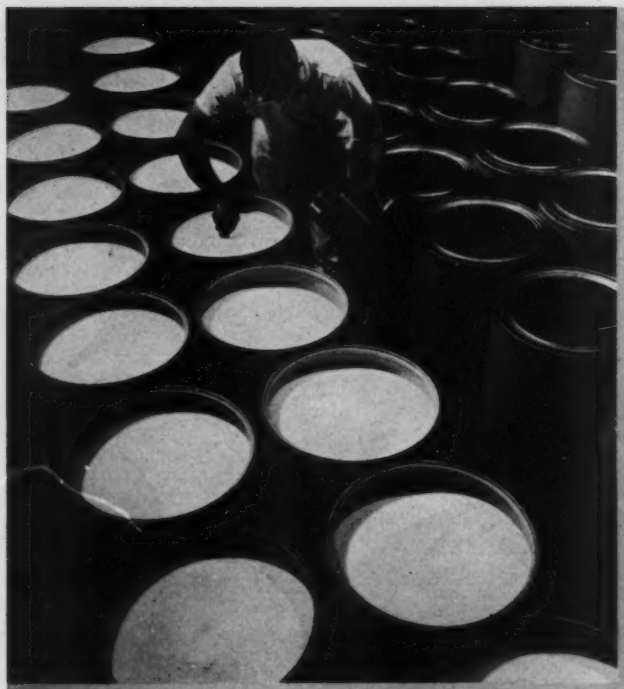

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Additional Supplies Now Available

Citric Acid U.S.P.
- Granular
- Fine Granular
- Confection Grade
- Powder

Citric Acid Anhydrous
- Granular
- Fine Granular
- Powder

Sodium Citrate U.S.P.
Sodium Citrate Anhydrous
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Expanded capacity at Pfizer's plant in Groton, Conn., has made possible increased production of citric acid and its many important derivatives.

Pfizer's recently enlarged citric acid plant at Groton, Conn.

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Manufacturing Chemists for Over 100 Years

Write for technical data and prices to Chas. Pfizer & Co., Inc., 630 Flushing Ave., Brooklyn 6, N.Y.; 425 North Michigan Ave., Chicago 11, Ill.; 605 Third St., San Francisco 7, Calif.

The Manufacturing Confectioner

OCTOBER, 1951, Vol. XXXI No. 10

The Art of Making

Panned Confections

By H. B. COSLER
Quartermaster Food and Container Institute

ALTHOUGH the title of this talk is as stated above, it could well be entitled, "Rainbow Confections, the most colorful of candies." Panned confections run the gamut of the color spectrum, from the dainty pastel shades of coated almonds, and similar items, to the more intense colors of Easter eggs.

Most of you are familiar with revolving pans. For the benefit of a few who many not be, if you can picture a cooking kettle approximately 3 feet in diameter, set at an angle of about 20° with a shaft attached for driving, you have a fair picture. Of course the front of the pan, corresponding to the top of the kettle, is folded around in order to hold the candies, with an opening of about 2 feet. The pan can be pulley and gear driven, or direct motor driven, as is the case of the later models, and revolves at speeds of from 15 to 28 RPM depending on the product.

Revolving pans have been in use for 75 years or longer. Probably the first ones were driven by hand. Practically every type of candy manufacturing machinery has been improved except pans. A pan made 50 years ago, except for wear and tear, is almost identical with the present day pan. Other candy making equipment has been mechanized to the point where it is almost automatic, and only partially dependent on the human element. Not so with pan work. It is just as much dependent on the operator as it was 75 years ago.

I have been with candy companies almost all of my working life, all of them having pan departments, and have been in many other plants operating pans. The operation depends on the individual in all cases. I personally have spent many hours attempting to devise methods to eliminate any part of the human element, but must admit with little success. True, when only one item such as sugar coated chewing gum, is manufactured, certain operations can be more or less automatic. Where a variety of pan work is made this has not been done.

Pans are usually set up in units of 4, 6, or 12 depending to a certain degree on plant precedent. For certain types of pan work it is necessary to have air for drying. This is usually accomplished by one blower servicing a group of pans by a large air duct with individual outlets to each pan. The amount of air to each pan is controlled by a valve, usually a simple gate type, in the *leadin duct.*

Panning operations at best are dusty. The pharmaceutical plants were the first to install exhaust systems, operating in reverse to the air system, which would remove the dust from the pans. Some candy companies have this same type of installation, but far too few.

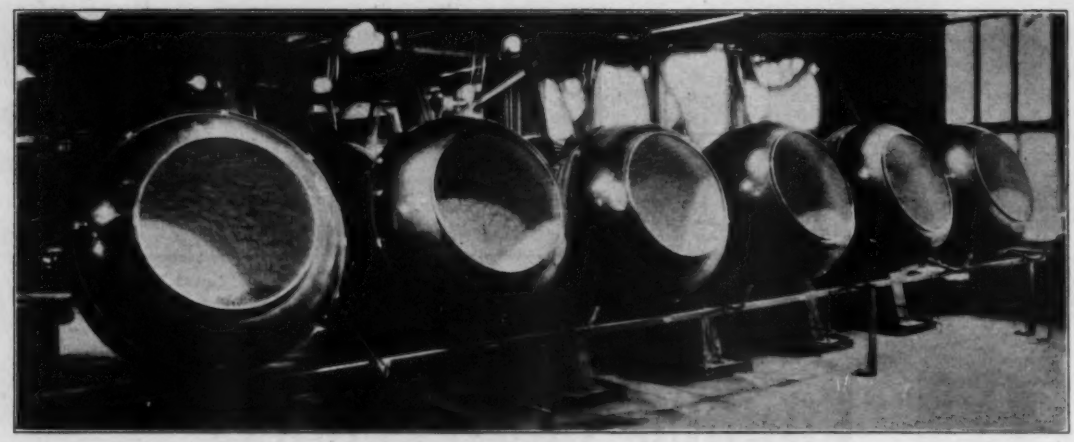
There are two types of pan work—the cold pan process and the hot pan process. This is somewhat confusing as oft times hot pan work is made in cold pans. A better description might be soft pan work and hard pan work.

The cold or soft pan process will be discussed first. Panned items such as jelly beans, Easter eggs, Boston baked beans, Cinnamon imperials and similar items fall in this category. In this process the centers to be coated are put in the pan set for a revolving speed of from 25 to 28 R.P.M. A gumming solution is used to wet the centers. This solution is not at all standard. Every pan man has his own ideas. Essentially it consists of corn sirup, sugar and an adhesive such as gum arabic or dextrin. Low purity corn sirups can be used and are desirable. The proportions are varied according to season. In the summer when the heat and humidity causes slower drying, more sugar and less corn sirup is used. In the winter, the reverse. An experienced pan man will vary the gumming solution several times during the year to meet weather conditions. A charge of grossing sirup is poured on the centers tumbling in the pans. A very small amount of coarse granulated sugar is added at the same time to prevent sticking of the centers. The centers tumble until the grossing sirup is evenly distributed then a heavy charge of dry fine granulated sugar is added. As the centers tumble they take up an even coating of sugar. They are allowed to run until fairly dry—if too wet more sugar is added. Another charge of grossing sirup and sugar is given the centers and the process is re-

---

Mr. Cosler, author of the above article, was formerly vice president in charge of production of both the Pan and Veri-Brite candy factories in Chicago, and more recently with the Chase Candy Company. He is at present with the Quartermaster Food and Container Institute as supervisor of research and preparation of specification on candy.

This talk was given before the Chicago group of the AACT September 11th.



A battery of revolving pans installed in a modern candy plant.

peated until the correct amount, depending on the type of candy, has been added. Flavor is added after the second charge. The last two charges of sirup are colored. The final charge of sugar consists entirely of powdered sugar, usually of the 4X grade. The candies continue tumbling in the pan, with the addition of more powdered sugar, if necessary, until the surface of the candies is dry. They are then removed from the pans into trays. Only a small amount is put into each tray. The trays can be of the starch type with legs or specially built trays that can be stacked in such a manner to allow air to circulate over the candy. The coated candies must stand for whatever length of time required for the coating to acquire a set and dry out enough to be firm. If an air conditioned room is used for this the time required will be from one day for certain types of candy such as cinnamon imperials or marshmellow centers, to three for soft centers such as jelly beans. If an air conditioned room is not used, and this is the case in most plants, the conditioning time will depend on the weather. When the coating is firm, the candies are transferred to smooth revolving finishing pans, where two or three small charges of straight sugar sirup, colored the same as the coated candies, are added and allowed to dry. This dissolves the powdered sugar on the surface and gives the candy a smooth surface. They are transferred at once to the polishing pans. Polishing pans are ribbed with the ribs set in such a manner that candies tumble and also move from front to back. Polishing pans are sometimes lined with a coating of bees wax. However, a very good polish can be obtained without lining the pans but by dusting a very small amount of finely powdered carnauba wax on the tumbling candies and allowing them to tumble until well polished. They are then removed from the pans to trays and allowed to stand overnight before packing.

The hot pan or hard pan candies require pans that, as the name implies, can be heated. This is accomplished either by copper coils around the pan to carry steam, or by a gas burner under the pan, curved to the shape of the pan. The former is the most satisfactory as it provides a more even distribution of heat.

Sugar coated almonds are made by this method. The almonds are first placed in unheated pans and given at least two charges of a gum arabic solution, drying each charge with powdered sugar or preferably flour. They are then removed from the pans into trays and allowed to dry until this coating is hard. This is necessary to prevent the oil in the almond from exuding through the coating during the coating process. After the coating has hardened the almonds are put into the heated pans for sugar coating. A sugar sirup is prepared by boiling a high grade sugar and water. For the first charges the sirup is cooked lower (about 34 Be'). This is necessary in order to thoroughly cover the tips of the almonds. For the first few hours the pans should revolve at about 15 R.P.M. as at the slower speed the coating will not rub off the tips. Continuous charges of sirup are given the almonds, drying thoroughly after each charge. The Be' of the sirup and the speed of the pans are increased and the coating builds up more rapidly. Flavor is added when the almonds are about half the final size. The very finest almonds have a sugar coating of about 1 lb. to 1¼ lbs. of sugar per pound of almonds. These are the most difficult to run as the thin coating will break or chip easily. The better grades are usually 2 to 1. The very cheapest grades are sometimes made as high as 4 to 1. Made with this amount of sugar the sale of almonds is hurt rather than helped.

When the coating has reached the desired amount the heat is turned off the pans and the coated almonds are given a few charges of lower cooked sirup containing color. This makes the surface very smooth. They are then removed from the pans and polished in the manner described above.

A faster method of making almonds is to dry each wetting with powdered sugar using care to avoid building a rough or bumpy coating. In my opinion this does not produce as high quality an almond as the first method although some time can be saved in the process.

The method of making non pareils is similar to almonds except that charges of powdered starch are used to whiten the nonpareil. Nonpareils are started from a small grain of sugar and frequent gradings by screening are necessary to maintain uniformity of size. One hundred pounds of small sugar crystals will build to several hundred pounds of finished nonpareils.

All the various types of hot pan work cannot be covered in this one paper. The well known jawbreaker is made by the process similar to nonpareils and almonds. Burnt Peanuts and Almonds and Creamed Filberts are both made in hot pans, but each by a different method.

If any of you are contemplating a pan department, my first advice to you would be—Get a Good Pan Man.

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COCONUT NEWS & PREVIEWS

By Charles B. de Maya
Mgr. Franklin Baker Laboratories

and Max E. Ruehrmund
Mgr. Franklin Baker Industrial Service Laboratory

COCONUT SUPPLY

Only 6,442,000 pounds of desiccated coconut were shipped from the Philippines during August. This compares with 20,671,000 pounds shipped in August, 1951, and is one of the lightest volume months reported since the resumption of large-scale production in 1948. The seven months cumulative figure is 56,562,000 pounds versus 102,522,000 in the same period of 1950. No shortages are reported even though seasonally increased demands from confectioners are evident.

COSTS

Whole-coconut costs had been falling during the summer months—when nuts are generally in greatest supply—but, during the past few weeks, prices have shown a somewhat firming tendency.

COCONUT SNOW BALLS

It's a little ahead of season, but here's a Christmas retail candy item you'll like. Take a fresh, moist bon-bon center and coat it with a dipping marshmallow. Then roll it in Tender-Fresh Medium or Short Shred. If you like, you might use the colored coconut we talked about in last month's issue. Write for formulas.

WHAT—ANOTHER TYPHOON?

The last typhoon reported in the Philippines area was called "Iris." This one's been dubbed "Marge," and it was the fourth in three weeks. Propelled by 90-mile-an-hour center gales, "Marge" brought with it heavy downpours which flooded many rivers and caused destruction to roads, bridges and rice crops but no damage to coconut groves. The typhoon center curved Northwestward and by-passed the Philippines, heading for Okinawa.

SAFETY PROGRAM PAYS OFF!

A very unusual safety record has been set by the Franklin Baker plant in San Pablo, Republic of the Philippines. As of June 30, 1951, this plant achieved the amazing record of 1,077,228 accident-free man-hours! That puts this plant at the top of the list with only two other units in General Foods Corporation today reporting 1,000,000 accident-free man-hours!

OLD-FASHIONED COCONUT CREAMS

Here's a real Fall taste-treat with that old-time flavor. It's a superb blend of Creamed Coconut and Gem Macaroon Coconut center dipped in dark chocolate. Or, if you prefer, substitute Tender-Fresh for Gem. Formulas available on request.

See our warehousing story on next page

HEADQUARTERS for FRESH COCONUT

Good Warehousing . . . the Key to Keeping Coconut Fresh

Operation "Freshness"!

We might call this a "Freshness Insurance Map."

See those arrows out there in the sea lanes? Those are the ports of entry . . . the points where coconut shipments arrive in this country from your ideal plant in the Philippines.

Those buildings scattered across the country are strategic locations of warehouses, selected for the best storage of our coconut. We handle most of our shipments on *overland bills of lading*, so that, when they arrive in the U. S., they can be held in certain *intransit and public warehouses*—from which speedy shipments of coconut are sent to you on receipt of your order.

This arrangement enables us to give you the freshest possible coconut . . . (1) in the greatest number of varieties . . . (2) in the quickest possible time . . . (3) at the most reasonable price.

From Ship-to-Shore-to-You!

After the coconut arrives at the ports of entry shown on the map, it is inspected by Franklin Baker Import Brokers to assure its arrival in good condition. Then it is loaded on trains and trucks and shipped across country to the warehouses where it is stored under proper sanitary conditions at controlled temperatures that safeguard its freshness for you.

Warehousing For Freshness

As you know, coconut is a *perishable* food and extra care should be taken to insure freshness, cleanliness and a maintenance of high quality. That's why good warehousing is essential. But—just what *does* good warehousing mean? It means . . .

- Storing coconut in a clean, dry, well-ventilated area . . . with other foods, but away from grain and cereal products or any other foods that are subject to insect infestation.
- Adequate insect and rodent control.
- Palletized system of storage—coconut stored on numbered skids to make sure all old stock is used before new; bags stored off the floor and away from the wall.
- Cold storage in warm climates to prevent yellowing and development of free fatty acid; storage at 40°F. in stacks of 15 high—at 70°F. in stacks of no more than 10 high.

Want to Know More About Good Warehousing?

In selecting suitable warehousing for our coconut, Franklin Baker adheres to these salient factors as closely as local facilities permit, so that you can have the best possible *fresh* coconut for your candy production. Any questions? Send for Franklin Baker's Warehouse Inspection Checklist, prepared by our expert Sanitation Engineers. It's *free!* Write Franklin Baker, Hoboken, New Jersey—*today!*

HEADQUARTERS FOR COCONUT, FRANKLIN BAKER DIVISION, GENERAL FOODS CORP., HOBOKEN, N. J.

A type of coconut for every confectionery need. Complete line includes the following famous brands:

Gem Philippine Coconut *(10 varieties)* **Golden Toasted Coconut** *(7 varieties)*

Tender-Fresh Coconut *(4 varieties)* **Baker's Creamed Coconut**

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candy making for the beginner.

by ALFRED E. LEIGHTON
Consulting Food Chemist & Candy Technologist
Riverdale, N. Y.

JAP JELLIES & THEIR MANUFACTURE

(Continued)

(Practical exercise in the making of Jap jelly. Read instructions carefully, and be sure they are understood before proceeding.)

PURCHASE about 1 to 2 ounces of purest agar-agar from your local druggist, or laboratory supply dealer. Check your thermometer for accuracy as outlined in earlier lessons. Assemble all equipment. Place a sheet of clean Kraft paper, cut to a size of 14" by 4", on your cookie sheet. Arrange bars to enclose an oblong of about 12" by 2", and fold the ends and sides of the Kraft paper upwards, so that the inside surfaces of the bars are also covered with paper. Snip the corners of the paper with scissors to make folding easier at those points. Place the arrangement on one side until needed.

1. Weigh ½ of an ounce of agar-agar on a piece of tared waxed paper, and place on one side until needed.

2. Measure 8 ounces of water into the top of the double boiler, and pour the weighed agar into this—leave it to soak until needed.

3. Weigh off 8 ounces of granulated sugar into a tared paper bag.

4. Weigh off 9 ounces of corn syrup into a tared container.

5. After the lapse of a minimum period of four hours for soaking the agar, pour off the soak water, and replace it with about an equal volume of clean water. Commence warming the agar and water gently, stiring from time to time to complete the solution of the agar. Bring the solution to the boil, and when all is dissolved, pour it through a tea-strainer or similar sieve, into another saucepan. This will strain off and remove any foreign matter that might be present in the solution.

6. Add the weighed sugar and corn syrup to the clarified agar solution stirring to mix, and heating to the boiling point.

7. Raise the temperature to 224 degrees Fahr. at sea level (12 degrees above the boiling point of water as shown on your thermometer). Withdraw from the heat and cool to 125 degrees F. by immersing the boiler in cold water as described in earlier lessons.

8. Add color, flavor, and one level teaspoonful of citric acid powder (dissolved in about an equal volume of water) to the cooled jelly batch. Stir to mix and blend.

9. Pour the mixture onto the Kraft paper-lined sheet, within the bars as previously arranged. Place aside to cool and set.

10. Remove the bars from the jelly slab, turn upside down, and place the exposed surface on a clean part of the cookie sheet which has been sprinkled with granulated sugar to receive the slab of jelly.

11. Moisten the exposed paper lining with a wet cloth, until the paper is uniformly wetted. Peel off the moistened paper from the candy as soon as it separates easily therefrom; thereby leaving a clean slab of jelly, fully exposed.

12. Sprinkle granulated sugar over the surface of the jelly, and proceed to cut it into 1" squares with a wire cheese cutter, or a thin-bladed sharp knife, which has been moistened with water—use pressure down to cut.

13. Separate cut squares of jelly and throw them into granulated sugar to sand them, as described in lesson under the practical exercise in pectin jelly making.

14. Remove pieces from sugar, and place aside to dry, after which the candy is ready for eating.

15. Repeat the exercise using different flavors and associated colors, for variety and experience.

Lesson XII

CHOCOLATE—ITS MANUFACTURE, AND USE IN CANDY MAKING

Up to this time our lessons have been devoted to the "why's", "wherefore's", and the "how's" of every day candy making. They are routine items of the industry —the very bones of it so to speak. However, the bones may acquire flesh as it were, for many of the items and the confections we have already dealt with, can be covered with chocolate: transformed thereby into a sort of prestige class of sweetmeats. The glamorizing process is all due to the chocolate coating. Because of this, and the volume-wise importance of chocolate covered items to the industry as a whole, the subject of chocolate will be dealt with at some length. The treatment will not be exhaustive by any means, but will be simplified, condensed, and made to bring out the mere essentials. Thus the historical background right through to modern processes of cultivation and harvesting, the preparation of the raw material for the market, the methods in vogue for making chocolate coatings for use in the candy kitchen and factory, all will be elaborated. The purpose is to familiarize the student with this most important raw material in its many phases, so that he can regard the subject with understanding, and act with good judgement if and when called upon to do so.

History of Chocolate

There is perhaps more romance wrapped up in chocolate than in any other raw material of the candy industry. Chocolate has been regarded as a luxury item for about four to five hundred years. In the countries of its origin—the raw material of chocolate, namely the cacao* bean, has always been highly prized. So much so in fact, that they, the cacoa beans, were used as currency. Through the years the raw material has become tremendously important in world economy. So far as we know the cacao tree was in existence about the year 1500. The Aztecs of Mexico and the Incas of Peru were familiar with the plant, possibly for generations. Methods of proc-

essing its products to produce a beverage known under the name of "chocolatl" were common knowledge of the time. Crude as this beverage was undoubtedly, to our modern standards—it consisted never-the-less of ground cacao beans, flavored with vanilla beans and spices, and suspended in a liquid vehicle, water. Our progress has been more along the lines of refinement. We still grind the cacao bean, albeit to somewhat finer standards and particle size; we still use vanilla, and in some cases spices. However, we do add sugar, and process the mass to a degree of fineness more befitting our educated palates.

Columbus, following one of his voyages to the New World, brought the possibilities of cacao to the attention of King Ferdinand of Spain, and later, Hernando Cortez, the conqueror of Mexico, made mention of it in 1519. Seemingly nothing much was done about the discovery at that time. However, the Spanish sailors helped spread the growth of the plant to other Spanish possessions. Gradually the various localities began to develop and grow their own types of cacao plant. The methods of cultivation were the "hush-hush" of the period for quite a while. Finally the products of the cocao tree gained acceptance in Europe, sometime before 1558, since we know that Charles V of Spain was familiar with a chocolate beverage. In the early part of the next century the brother of the famous Cardinal Richelieu, introduced the bean and it became favorably known in France. Customary methods so far as they were known, of grinding the bean with spices and vanilla beans, but with added sugar, became the processes of the time for making the product for beverage purposes. From France, to England, and thence to other parts of Europe, the use and knowledge of the bean spread. South America exported the ground bean, and Spain imported it in that form, selling it in turn to France and England. The product was so highly esteemed that it soon became the subject of luxury taxes.

From 1728 and onwards, the industry of cacao products grew and spread to Holland where it was taken up 1815 to 1822 by van Houten, (a famous name in chocolate) before it finally came to the United States, about 1866. A Swiss Chocolatier, Daniel Peter by name, introduced a solid form of milk chocolate to Switzerland, around 1876, so it is reported. Since that time and onwards unto this day, the technology of chocolate making, has advanced in the direction of improved machinery for processing. A better understanding of the nature and characteristics of the product is becoming more widespread. Our modern chocolate products are more highly refined as a consequence. We are still studying and digging for the answers as to why chocolate behaves in the way it does, and how best we can make it perform to our own pattern of requirements. So long as chocolate has been known, both in the countries of its origin, and to the civilizations to which the irrestible march of commerce has spread it—it has been highly regarded and esteemed—it is indeed the glamour product of the candy industry!

Preliminary Processing of the Beans

The cacao tree as we know it, the source of the beans, is a tropical plant found growing and cultivated in Brazil, Central America, Ecuador, Venezuela, West Indies, East Indies, Ceylon, South Pacific, and West Africa. The tree requires care: for it is a delicate plant subject to disease if neglected. The tree bears gourd-like pods, larger, or about twice as large as a man's fist, which grow out of the trunks and branches at various heights. The pods are easily reached by the harvesters when they become ripe. They are red-orange or yellow in appearance. When cut open, a mass of whitish pulp containing 30 to 40 seeds, is revealed. One hundred such seeds may weigh from three to six ounces depending upon the locality of growth. Shortly after the ripe pods have been plucked, the seeds are emptied into containers, and when a sufficient quantity has been collected, they are piled upon a mass of clean plantain leaves, or into boxes, also lined with plantain leaves. The boxes have false bottoms to permit fluids of fermentation to drain away. A covering of plantain leaves is put over the seeds or beans, and they are left to ferment, and heat up. This process is general, although there are centres in which the beans are subjected to drying without appreciable fermentation. During the fermentation, the beans are turned over at intervals of a day or so, to release the imprisoned heat, and to equalize the fermenting process. Where performed this fermentation of the seeds is of major importance. During the process a good deal of the pulp disappears, the color, flavor, and texture are improved and developed. This treatment will be maintained for about a week. Gradually the beans begin to darken and take on a brownish hue. When fermentation is judged to be complete the beans are then spread upon trays in the open, or on clean cement patios in some countries, and allowed to dry thoroughly by gradual and graduated exposure to the sun; or they are sometimes artifically dried in kilns. The drying also takes some days, during which the beans are turned over at intervals, and are protected at night from the rain and the weather. When the beans are thoroughly dry, they are bagged, taken to collecting centres, and made ready for shipment into commerce.

Types of Cacao Beans

Broadly speaking there are two types of cacao beans, with the possibility of a hybrid or interbred third type. The first is known as the *Forestero Bean* which in turn is subdivided into four varieties, and the second is known as the *Criollo Bean*. The *Calabacillo* is sometimes considered to be a third type. The Forestero bean is grown in West Africa, Brazil, Central America to some extent, and in the West Indies. It probably constitutes more than 50% of the world supply of cacao beans. The quality is deemed to be secondary to that of the Criollo bean. This question of quality is evidenced in flavor intensities, which vary from mild to strong, according to the country of origin. Accra (Gold Coast) Bahia (Brazil) St. Domingo, and Dominica, just to mention a few, are of the strong flavored kind, whereas Carcacas, Arriba, Puerto Cabello, Ceylon and Java beans are mild in flavor.

**The reader will notice that the spelling "cacao" is used in some places and "cocoa" in others. According to the suggestions of several recent International Conferences these spellings have been deemed desirable: for products from the tree right up to the manufacturing stage as "cacao," and "cocoa" when the products reach the manufacturing stage and onwards through all phases.*

Processing the Cacao Bean by Stages

The cacao beans require a considerable amount of processing before they finish up as the elegant product we know as chocolate. Processes of cleaning, sorting, and roasting are preparatory. After roasting, the beans have to be broken, and the shells separated from the kernels or "nibs" as they are called, before the important stage of grinding is commenced.

Cleaning the Beans. Sticks and stones, clay and dirt, even metal are all likely to be present in shipments of beans. Obviously, they have to be removed for flavor sake, and also to prevent damage to machinery. The beans are passed through machines, fitted with revolving screens, that clean the material. Magnetic separators remove iron, steel and magnetisable metals, other adulterants are removed by suction etc. The cleaned beans are then inspected, and poor ones removed as they come from the machine.

Roasting the Beans. In most instances the beans are roasted before they are blended because individual types may require special treatment such as heat and duration not necessary, or desirable for all kinds, or constituents of a blend. However, there are occasions when blending prior to roasting can be done without spoiling the results. The roasting process develops flavor, aroma, modifies natural bitter principles, and makes the shells easier to remove. Temperatures of roasting differ between European and American practices. In Europe lower temperatures are favored for the most part, whereas in the United States temperatures are taken higher. Roasting temperatures may vary from 220 degrees F. to 280 degrees, or even higher, and will depend on circumstances and the end use of the beans.

Following the roasting process, the beans are cooled quickly to arrest unwanted developments which could be brought about by the internal heat of the material. Machines used for roasting are of various kinds, some are similar or identical with those used in the roasting of coffee. Any fuel available can be used, batch processes are common, but continuous processes are becoming more general. In batch processes, hot air is blown onto the beans which are kept in constant motion. Fumes and other unwanted products developed in processing, are removed with air blasts. The beans are turned out into containers (provided with perforated bottoms) at the conclusion of the roasting process. Cold air is then drawn through the perforated bottoms of the containers, and that does its cooling work. Continuous processes work on the same principles with regulated volumes of air for the various effects. In some methods the beans are heated and only partially roasted. The heating is sufficient to enable the shells to be removed properly, when cracked between rolls. The broken shells are removed, and the roasting finished by treating the cacao nibs.

Preparing the Bean for Grinding

In all processes the shell has to be removed at some stage. Cleaning, winnowing, or husking, are names given to the process, and they all amount to virtually the same thing. The beans are either passed through breaking rollers suitably adjusted, so that they will crack the shells, or the beans are blown against a striking plate by means of a fast moving current of air. The concussion breaks the shells—they are blown clear of the nibs by the air currents; which lift the lighter shells, while the heavier nibs fall into screening devices, which finish the nib cleaning process.

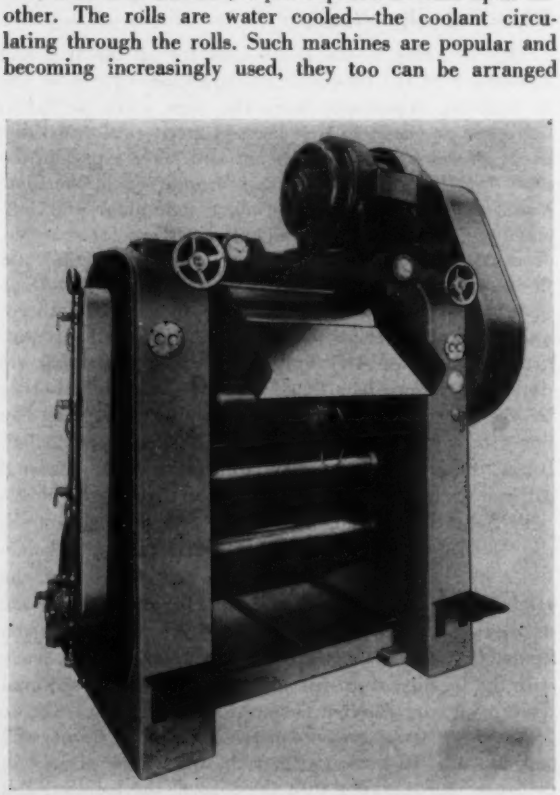
Buhler Chocolate Refiner

Blending the Beans

This blending of the beans calls for all the skill and knowledge of the chocolate manufacturer—for it is one of supreme importance from the view point of flavor. All other processes having been properly performed, the geographical origin of the beans still plays a part in the end; for flavor, for color and aroma. Each chocolate maker tries to make his product individual and outstanding. The beans vary in characteristics: for example, West African beans are reasonably uniform in color and flavor, which is inclined to be on the flat side. Accra and Lagos beans are considered to be of equal merit, and perhaps superior to others grown in other cacao growing areas of Africa. Bahia beans from Brazil, are darker in color than the African beans. They border on the purple side and have a characteristic fruit-like flavor to some people. A blend of African and Brazilian beans raises the flavor level of the mixture. Seasonal differences in growth effects are also more in evidence with Bahia beans than in African. Sanchez beans from the Dominican Republic, are strong, dark and sometimes stately—they have a use in blending. Ecuador, the Island of Trindad, and Venezuela, provide beans of the desired color and flavor, of the Caracas and Arriba kinds. Caracas beans have flavor gradations that vary with the locality of growth. Arriba beans have a seasonal flavor characteristic that is spice-like in the summer crop. Maracaibo beans are distinctive in color, flavor and consequently cost. So, with such differences always in evidence, and varying with the season, the locality, and the kind or type of bean—the blender of cacao beans

is called up on to use much skill and knowledge to accomplish his purpose. Without going into the subject more exhaustively—just giving a few highlights in fact, the desirable results in chocolate making, and in the by-products such as cocoa butter, cocoa powder, etc., depend upon processing niceties and knowledge of raw materials.

Grinding the Nibs. In the first processing stage, the results of which cause the product to take on the appearance of chocolate. Grinding usually takes place immediately after roasting and cleaning, while the nibs are still warm, dry, and easily crushed. There is enough heat retained in the nibs, together with that caused by frictional causes, to liquefy the mass under treatment. Grinding machines are of several types, the oldest being a stone mill arranged in double sets of grooved stones. One stone in each set is fixed, while the other rotates upon it. A small clearance separates the two. The nibs are fed into a central opening in one stone, and while being ground, mashed, and liquefied, the mass works itself to the outside rim of the stones, from which it pours, is collected, and passed on to another set of stones, wherein the process is repeated a second time and a third time if necessary. Each grinding reduces the particle size of the solid portions of the chocolate, which are suspended in the molten cocoa butter of the mass. The liquid character of the cocoa butter has been brought about by the frictional heat developed in grinding—the solid portions of course do not melt—they can only be ground to finer and finer sizes. Frictional heat has sometimes to be controlled by cooling between the stages of grinding. Another type of grinding machine is the multi-roll type —5, 6 or 8 in number, super-imposed in tiers upon another. The rolls are water cooled—the coolant circulating through the rolls. Such machines are popular and becoming increasingly used, they too can be arranged in series, each set adding to the refining process. The Bramley Mill is yet another machine. It is a stationary drum type, jacketed for cooling, and of such design internally that a series of rotating arms combine to grind and aerate the product against a corrugated surface of the drum interior.



Lehmann 5-roll Chocolate Refiner

The material discharged or taken away from the mills is known as, or becomes, the "chocolate liquor" of commerce.

Flow Sheet for Cacao Products

For the guidance of the student it should be mentioned that the following outline of chocolate processing and manufacture is complete enough for the purposes of the candy maker. There are other processes and by-products obtained from cocoa products that have been purposely omitted because they are not of any special significance so far as the candy maker is concerned.

Agricultural—preparation for market.

Cacao tree ➡ harvesting ripe pods ➡ opening pods and removing seeds ➡ piling and fermenting seeds ➡ drying fermented seeds ➡ collecting, grading and bagging of seeds or beans ➡ trucking to central station for storage ➡ shipment into commerce.

Manufacture of Basic Chocolate

BEANS ➡ sorting ➡ cleaning ➡ roasting ➡ blending ➡ cracking & de-husking ➡

nibs ➡
- alkali treatment (dutch processing) ➡ 2nd. roast ➡ grinding to liquor.
- grinding & refining to chocolate liquor ➡ moulding into slabs

Basic Chocolate Processing

1. *CHOCOLATE LIQUOR,* moulding into blocks for baking and other food uses. (Baking Chocolate)

2. *Chocolate liquor,* mixed with sugar, flavors, cocoa butter* ➡ melanging & conching to sweet or semi-sweet chocolate ➡ moulding into blocks for coatings in candy manufacture.

3. *Chocolate liquor,* mixed with sugar, milk products (powders, butter fat) ➡ melanging & conching—milk chocolate coatings—moulding into blocks for candy manufacture.

4. *Chocolate liquor,* regular (natural process), or alkali treated (dutch process) ➡ hydraulic pressing to produce (a) cocoa press cake ➡ grinding to cocoa powder (regular beverage product) natural or dutch process, according to type of liquor pressed. (b). cocoa butter for use in making coatings, or other industrial uses (cosmetics, pharmaceuticals, candy making).

To Be Continued: Next installment will conclude the manufacture of chocolate, touch upon cocoa powder and cocoa butter, and enter upon the commercial use of coatings for confectionery finishing, in candy plant and kitchen.

**In the making of coatings, the basic material, chocolate liquor with its 50 to 55% cocoa butter content, does not contain enough cocoa butter to provide sufficient plasticity for ease of working when such dry materials as sugar, milk powder etc. are added. The need for extra cocoa butter is therefore apparent and is most conveniently supplied by that which is pressed out in the making of cocoa press cake.*

Distribution • Sales • Advertising

• **Fred W. Amend Co.,** Danville, Ill., has signed to sponsor "Hail the Champ" over ABC-TV from 5:30 to 6 P.M., CDT, starting Saturday, Sept. 22. The children's telecast, placed through Henri, Hurst & McDonald, Chicago, for 52 weeks, will be seen on Stations WENR-TV, Chicago; WXYZ-TV, Detroit, and WXEL, Cleveland. Amend's Chuckles will be featured on the weekly program.

• **Mars bars** will be advertised on radio, television and in magazines this fall.

Milky Way and Forever Yours bars will be featured on Art Linkletter's "People Are Funny" radio show on CBS, starting October 9.

Mars will use NBC's TV show, "Howdy Doody", Mondays and Wednesdays, for its Snickers and Three Musketeers bars. A special premium offer to promote the two bars will start in October and continue through November.

Schedules in Collier's magazine, beginning September 29, and in Look, starting October 23, will advertise the Mars 10c bar.

• **Necco Canada Mints** have been placed aboard Capital Airlines passenger planes. Capital operates among 76 cities east of the Mississippi. The mints have been found to be an antidote for air-sickness besides being a good-will producer for the airline.

• **Good and Plenty candy** is commencing its second season of sponsoring the "Good and Plenty Western Theatre" over major TV stations throughout the nation. The same format as last season, which features Western films edited down to a half-hour of fast-moving action, will be continued. The sequence is carried along by a character, "Dave the Dude", who also carries the sales talk for the candy.

• **A Valentine line** including 11 candies in bulk packs, four fast-selling penny goods items, three specialties in 12-ounce cellophane bags, cello-wrapped chocolate marshmallow hearts to retail at 5c and 10c and, of course, 1-pound and 2-pound heart boxes of chocolates, has been announced by the Chase Candy Co.

Two standard Chase boxes—the Chocolate Mint Cordial box and the 12-ounce box of Chase Chocolate Bridge Mix—are also spotlighted for Valentine's Day promotion.

• **The John Horne Co.,** Evanston, Ill., is cooperating with the National Kid's Day Foundation in a $25,000 motion picture contest on October 20.

Contest entry blanks, inserted inside the wrappers of the Cocoanut Waffle bar, ask contestants to complete the statement "I like motion pictures because . . ." in 25 words or less. The candy company has agreed to turn over a substantial percentage of the gross sales to the foundation for aiding underprivileged kids.

Plans are now being made for a comprehensive promotion campaign around a new candy bar, the Peterkin, for winter sales. The Peterkin bar is a ten-cent item.

• **Schutter Candy Company** announces a new joint promotion in conjunction with the American Safety Razor Corporation, which will give candy retailers 25c per box extra profit, or almost double their regular profit, on every box of Old Nick or Bit-O-Honey they sell.

The details of the Old Nick and Bit-O-Honey Razor Blade Deal are simple. With each two boxes of Old Nick or Bit-O-Honey candy bars, or one box of each, that the retailer buys, his candy distributor gives him free of extra cost two 25c packages of five Silver Star Double-Edge Razor Blades on an attractive display card. The retailer sells these Silver Star blades and makes 50c, equal to 25c extra profit on each box of OLD NICK or Bit-O-Honey, almost double his regular profit.

The Razor Blade Deal will be in effect until September 30, 1951, and is being announced simultaneously to candy distributors and retailers coast to coast.

Sales Managers' Notes . . .

The Amster-Kertz Co., of Columbus, Ohio, has changed its name to Sharwell Tobacco Co. The office will remain at 134 E. Goodale St.

The Krohn Sales Company, formerly located at 5005 Euclid Ave., Cleveland, Ohio, have moved to 2138 Lee Road, in that city.

Mass Bros. recently changed their Philadelphia address to 3806-14 Market Street.

A. O. Fiset, of the A. O. Fiset Co., 3615 Avenue J., Brooklyn 10, N. Y., is organizing a jobbing establishment to contact variety stores.

Brown Jones Co. of Erie, Pennsylvania, has moved from 102 W. 26th Street to 1305 Peach Street.

Introducing—a new feature in The MANUFACTURING CONFECTIONER. Distribution•Sales•Advertising is a special section devoted to items for and about the sales manager. It is aimed at enabling him to keep up with his counterpart throughout the industry and to evaluate and compare their problems and solutions with his.

Each month will feature a table of comparative national advertising and promotion expenditure for the preceeding months, planned future advertising as announced by the various manufacturers, current and future promotion and sales campaigns, and news of sales personnel changes.

National Advertising

The listings below show the confectionery firms advertising nationally in magazines, radio and television for the stated months.

The second column in the magazine section indicates the amount spent by each company during that month in the various magazines. The third column indicates the accumulative total of all magazine advertising for that company so far this year. The fourth column shows the total magazine advertising expenditure of the listed firms for the previous year. The figures are printed by special permission of the Publishers Information Bureau.

The radio and television section reveals the amount of time and the media used by the listed firms during the month stated. Data is from network sources.

Magazines — JULY

Adv't'sr / Magazine	Amount	Total This Yr.	Total Last Yr.
Blum's Confectionery			
New Yorker	$ 378	$ 1,602	$ 0000
Brown & Haley Candy Co. (Almond Roca)			
Saturday Evening Post	1,545	11,540	27,567
Candy Pack Inc. (Swedish Mints)			
Family Circle Magazine	52	140	120
The Cracker Jack Co. (Campfire & Angelus Marshmallows			
Saturday Evening Post	9,625	42,264	54,047
Curtiss Candy Co. (Baby Ruth & Butterfinger bars)			
Better Living	5,475	41,627	29,702
Henry Heide, Inc.			
Life	4,490		
Saturday Evening Post	1,545	37,365	57,985
New England Confectionery Co. (Necco Candies)			
Look	21,930	81,120	89,680
Peter Paul, Inc. (Mounds bars)			
Look	3,189	218,133	222,929
Rockwood & Co. (Rockwood Wafers)			
Look	2,650	45,390	75,246
Sweets Co. of America, Inc. (Tootsie Rolls)			
Boy's Life	504		
Modern Screen	910		
Screen Stories	330		
Seventeen	675		
Totals	2,419	25,341	57,960
Switzer's Licorice Co.			
American Magazine	1,336		
Boy's Life	294		
Look	1,360		
Saturday Evening Post	1,680		
Totals	4,670	34,282	38,355
Stephen F. Whitman & Sons, Inc.			
Saturday Evening Post	17,100	235,730	408,005
William Wrigley, Jr., Co.			
Better Living	3,860		
Everywoman's Magazine	2,603		
Family Circle Magazine	6,293		
Parent's Magazine	3,615		
Today's Women	2,015		
Woman's Day	7,383		
Totals	25,769	159,427	198,361
Total July Magazine Expenditure	**100,837**		

Radio and Television — AUGUST

Sponsor	Network	No. of Stations	Time
American Chicle Co.	ABC	116	12 ½-hour shows
D. L. Clark Co.		WABD (local)	1 min. spots
Gold Medal Candy Co.		WNBT (local)	4 ½-hour shows
Hollywood Candy Co.	ABC-TV	27	4 ½-hour shows
Johnson Candy Co.	Dumont-TV	31	4 ½-hour shows
Kraft Foods Co.	Mutual	529	23 ½-hour shows
Mars, Inc.	NBC-TV	42	5 ½-hour shows
Mason, Au & Magenheimer	ABC-TV	18	4 ¼-hour shows
Peter Paul, Inc.	CBS	14 (Pacific)	23 ¼-hour newscasts
Planters Nut & Chocolate Co.	CBS	17	23 ¼-hour newscasts
Williamson Candy Co. (Oh Henry)	Mutual	486	4 ½-hour shows
William Wrigley, Jr., Co.	CBS	178	24 ½-hour shows
	CBS-TV	9	4 ½-hour shows

PEOPLE sell better than paper

YOU WON'T SELL MUCH VICHYSSOISE . . .

. . . UNLESS YOU USE THE HUMAN VOISE

Every day at approximately 12:45 pm in restaurants throughout America, about 13 million businessmen ask about 3 million waiters this question: "What's good today?" Each one of the businessmen is looking at a complete menu when he asks the question.

Waiters sell better than menus. People sell better than paper.

Now suppose you had these people selling for you:

FRED ALLEN, LOUIS ARMSTRONG, EDDY ARNOLD, CHARLES BOYER, DAVID BRIAN, EDDIE CANTOR, JACK CARSON, MINDY CARSON, IMOGENE COCA, PERRY COMO, JOAN DAVIS, JIMMY DURANTE, DOUGLAS FAIRBANKS, Jr., JOSE FERRER, ED GARDNER, PHIL HARRIS, ED HERLIHY, PORTLAND HOFFA, BOB HOPE, DEBORAH KERR, BERT LAHR, FRANKIE LAINE, VIVIEN LEIGH, FRANK LOVEJOY, PAUL LUKAS, DEAN MARTIN AND JERRY LEWIS, GROUCHO MARX, DOROTHY McGUIRE, LAURITZ MELCHIOR, ETHEL MERMAN, ROBERT MERRILL, RAY MIDDLETON, RUSSELL NYPE, MARGARET O'BRIEN, SIR LAURENCE OLIVIER, EDITH PIAF, EZIO PINZA, JANE POWELL, PHIL SILVERS, SONS OF THE PIONEERS, HANLEY STAFFORD, DANNY THOMAS, MARGARET TRUMAN, EVELYN VARDEN, JIMMY WALLINGTON, CLIFTON WEBB, MEREDITH WILLSON, ED WYNN

. . . *and Tallulah Bankhead, dahlings.*

These are the people who would sell better than paper for you on NBC's THE BIG SHOW: Sundays 6:30-8:00 pm. Cost: $12,408 per week, *time and talent*, for a quarter-hour segment. Available in 13-week cycles.

NBC Radio Network *a service of Radio Corporation of America*

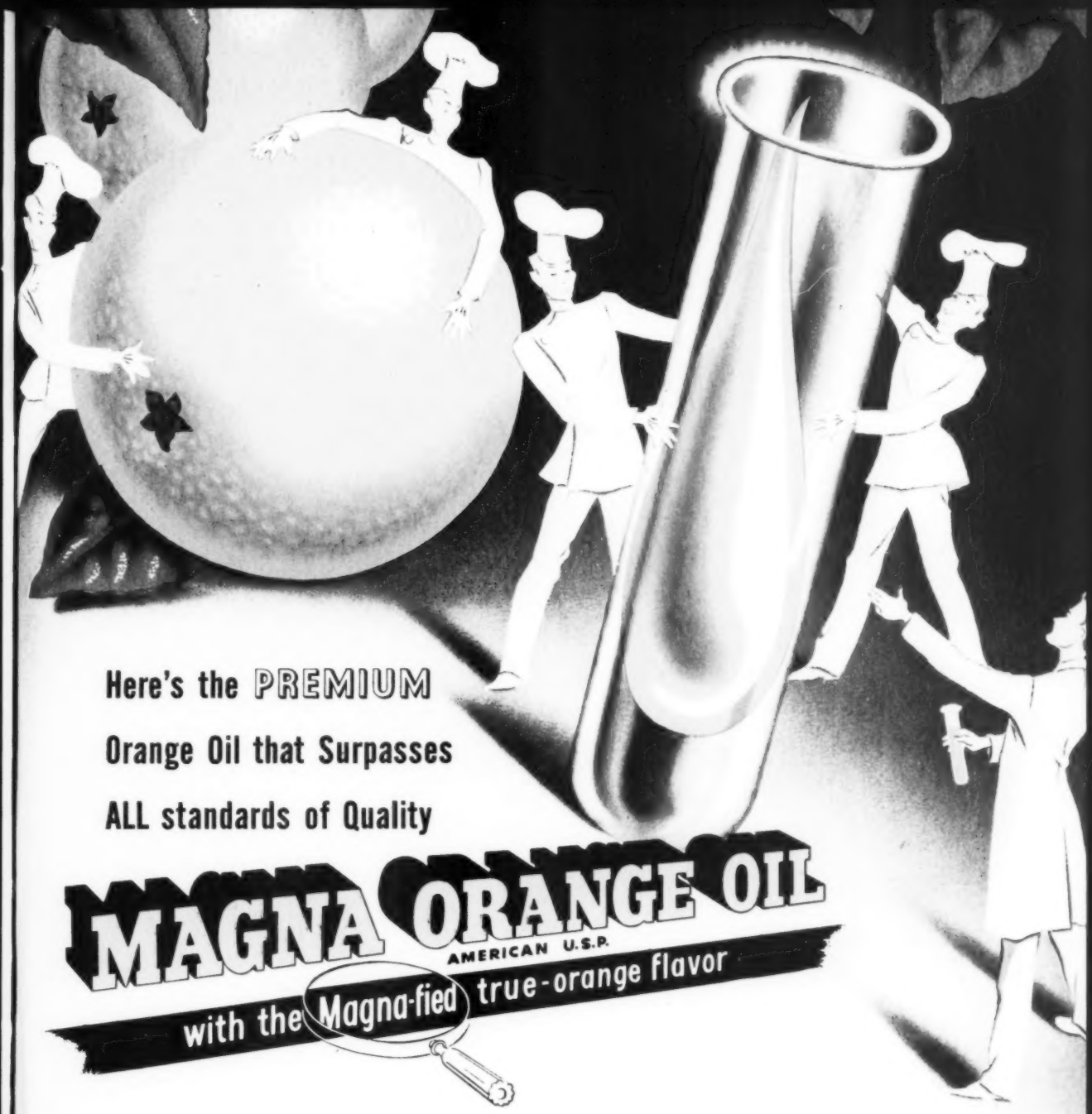
NATIONAL CANDY ADVERTISING IN 1950

There has been a great deal of talk, pro and con, recently on the efficacy of national advertising. In regard to this, the following table might prove interesting.

The firms listed below are major national advertisers. There are 33 of them out of the total of more than 1600 manufacturing confectioners. The best comparison we could make is with the soft drink manufacturers, of a national total of about 20 companies, ten are national advertisers. However, those ten placed national advertising in 1950 of about 11 million dollars compared with the little over nine million placed by the confectioners.

The following figures were compiled from the lists of Publishers Information Service and other public and private sources. The figures shown do not include advertising of non-confectionery products produced by the listed firms.

Firm and Product	Total	Newspaper	Magazine	Radio	TV
William Wrigley Jr. Co.					
gum	3,785,289	1,243,796	198,381	2,248,122	95,010
Mars, Inc.—bars	1,080,263	115,366	144,154	389,560	431,183
Peter, Paul, Inc.					
Almond Joy & Mounds	560,775		207,634	109,196	243,945
General Candy Corp.					
Oh Henry Bars	550,484			550,484	
Stephen F. Whitman & Son					
Boxes	486,074	29,854	381,390		54,830
Life Savers Corp.					
Life Savers	336,245	336,245			
E. J. Brach & Sons	260,558	207,538	53,020		
New England Confectionery Co.					
Necco Candies	224,273	134,593	89,680		
Lovell & Covel		3,330			
Bolster Bar		1,625			
Canada Mints		1,446			
Sweets Co. of America					
Tootsie Rolls	224,842	209,121	15,721		
National Dairy Products, Inc.					
Kraft caramels	186,370	186,370			
M & M, Inc.					
M & M Candies	139,415			23,900	115,515
Rockwood & Co.					
Chocolate Candy	124,864	110,778	14,086		
James O. Welch Co.	104,670				
Cocoanut Bar			68,730		
Mint Patties			35,940		
Thos. D. Richardson Co.					
Mints	102,005		61,155		
Party Patties			17,100		
Party Pillows			14,900		
Party Jellies			8,850		
Fred W. Amend Co.					
Chuckles	91,228	91,228			
Quaker City Choc. & Conf. Co.					
candies	79,210				79,210
Nestle's Chocolate Co.	73,141	333	72,808		
Norris, Inc.	71,256	71,256			
Wilbur-Suchard Chocolate Co.					
candies	70,893	25,908			44,985
Henry Heide, Inc.					
Heide Candy	57,985	57,985			
Mason, Au, & Magenheimer					
Mason Mints	57,700				57,700
Beech-Nut Packing Co.					
Beech-Nut Gum	57,680	160	57,520		
Cracker Jack Co.					
Campfire Marshmallows	54,047		54,047		
Brock Candy Co.	43,875		43,875		
F & F Laboratories					
cough drops	43,435	43,435			
Huyler's Candies	41,650		41,650		
Switzer's Licorice Co.	38,355	38,355			
Curtiss Candy Co.					
Baby Ruth	29,702		29,702		
Butterfinger	6,000		6,000		
Brown & Haley Candy Co.					
Almond Roca	27,567				
Standard Candy Co.					
Belle Camp Choc.	27,135	27,135			
Great Atlantic & Pacific Tea Co.					
A & P Candies	23,000		23,000		
Crosse & Blackwell Co.					
Keiller's Candy	7,446		7,446		
Planter's Nut & Chocolate Co.	6,710		6,710		
Grand Total	9,033,833	2,915,857	1,681,046	3,321,262	1,122,378



Here's the PREMIUM
Orange Oil that Surpasses
ALL standards of Quality

MAGNA ORANGE OIL

AMERICAN U.S.P.

with the Magna-fied true-orange flavor

Think you are using the best Orange Oil now? Then keep an open mind while you try MAGNA ORANGE OIL – the Orange Oil that gives you *maximum* uniformity, *maximum* solubility, *maximum* flavor trueness! Your first trial batch will prove to you what *thousands* of users have already discovered – that MAGNA ORANGE OIL is *surprisingly better!* Surprising, too, how *much* you save when you specify MAGNA ORANGE OIL. Write for complete information and schedule of prices.

other great
MAGNA CITRUS OILS
MAGNA GRAPEFRUIT OIL
(Expressed American)
MAGNA LIME OIL
(Expressed or Distilled)
MAGNA TANGERINE OIL
(Expressed American)
MAGNA LEMON OIL
(Expressed American)

MAGNUS, MABEE & REYNARD, INC.

SINCE 1895 . . . ONE OF THE WORLD'S GREATEST SUPPLIERS OF ESSENTIAL OILS

16 DESBROSSES STREET, NEW YORK 13, N. Y. • 221 NORTH LA SALLE STREET, CHICAGO 1, ILL.

LOS ANGELES: BRAUN CORP. • SEATTLE, PORTLAND, SPOKANE: VAN WATERS & ROGERS, INC. • SAN FRANCISCO: BRAUN-KNECHT-HEIMANN CO.

right you are with MAGNA Flavors BY MM&R

***28 WAYS TO BUILD CONSUMER PREFERENCE**

- *Magna Apple
- *Magna Banana No. 6
- *Magna Burnt Almond
- *Magna Butter, Oil Soluble "D" Type
- *Magna Bu-Van (Butter-Vanilla)
- *Magna Butterscotch No. 4
- *Magna Cherry
- *Magna Wild Cherry
- *Magna Coconut A F
- *Magna Grape M
- *Magna Grenadine CC
- *Magna Honey
- *Magna Jamaica Rum
- *Magna Maple Concrete
- *Magna Maple Extra
- *Magna Maraschino Base "C"
- *Magna Pineapple, Pineapco Type
- *Magna Raspberry No. 6
- *Magna Roman Punch
- *Magna Root Beer "B" Type
- *Magna Root Beer "C" Type
- *Magna Southern Fruit
- *Magna Strawberry No. 6
- *Magna Tropico
- *Magna Tutti Frutti
- *Magna Vanilla Base 8-Fold
- *Magna Vanilla Base 16-Fold
- *Magna Walnut, Black

*Imitation Flavor

Write for Complete Information and Schedule of Prices

THE PROOF'S IN THE PRODUCT — *your* product! Finer Magna Flavors are your own best salesmen — keep bringing customers back for more!

But that's not all! Magna Flavors are more highly concentrated . . . permit you to flavor *more* batches at lower cost. When you specify Magna Flavors, you gain *two* ways: Magna economy means greater profits for you . . . Magna quality means greater satisfaction for your customers! Write today for further information and schedule of prices!

AGNUS, ABEE & EYNARD, INC.

SINCE 1895 . . . ONE OF THE WORLD'S GREATEST SUPPLIERS OF ESSENTIAL OILS

16 DESBROSSES STREET, NEW YORK 13, N. Y. • 221 NORTH LASALLE STREET, CHICAGO 1, ILL.

LOS ANGELES: BRAUN CORP. • SEATTLE, PORTLAND, SPOKANE: VAN WATERS & ROGERS, INC.
SAN FRANCISCO: BRAUN-KNECHT-HEIMANN CO.

C.

ILL.

INC.

THIS

Candy Equipment PREVIEW

THIS SECTION APPEARS QUARTERLY IN THE MANUFACTURING CONFECTIONER

Dust In YOUR Candy Plant

Explosive material dust forms one of the major hazards in plant operation. Here's how YOU can prevent it.

By **R. E. GORGEN**
The Day Company

WHENEVER dry bulk materials are conveyed, spouted, elevated, or otherwise handled, dust is bound to escape into the room unless controlled by mechanical means. When this dust pollutes the general atmosphere of the plant, it creates difficult housekeeping problems by settling on all ledges such as beams, window sills, horizontal pipe runs, machinery, etc. Many of these dusts, such as starch, sugar, cocoa, etc., are highly explosive when in proper concentrations, and when ignited can set off a small primary explosion. This explosion, in itself, is usually not too damaging but it does shake loose the accumulated dust, creating a secondary explosion which can be disastrous.

The first basic principle of dust control is to pick up the dust at the source, preventing atmospheric pollution. Once in the atmosphere, it is difficult to control and requires large volumes of air to exhaust, plus a great deal of vacuum cleaning and other forms of housekeeping.

Most of the dust in candy plants is created by Moguls, bucket elevators, screw conveyors, storage bins, dryers, coolers, etc. No two plant layouts are identical, so good air engineering is required for a practical dust control installation.

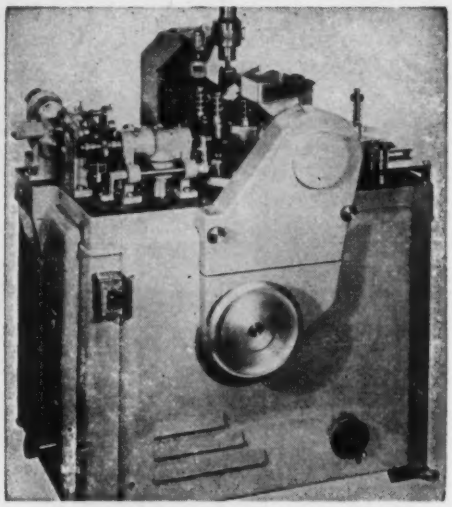
Good hood design minimizes the amount of air required by the exhaust system which, in turn, saves horsepower and requires less equipment to do an equal job. In engineering hoods many factors should be considered, such as the direction of material travel, which can be an aid in moving the dust into the hood; the secondary air movement created by the traveling product or equipment; the displacement of air by product in the bins, bucket elevators, etc.; the air velocity within the hoods, so as not to pick up more product than necessary and yet keep the dust from escaping; etc.

The next important step is to so design a system in which sufficient velocities are maintained, thus preventing material from settling in the pipe lines and yet holding the velocities to a minimum to avoid excess friction losses, resulting in wasted power. The equipment should, if possible, be so located as to avoid long pipe runs which create friction and consume excessive power.

If air containing explosive types of dust particles passes through the exhauster, which is not recommended, the wheel should be of a non-sparking material. The better method in such cases is to filter the dust out of the airstream ahead of the fan.

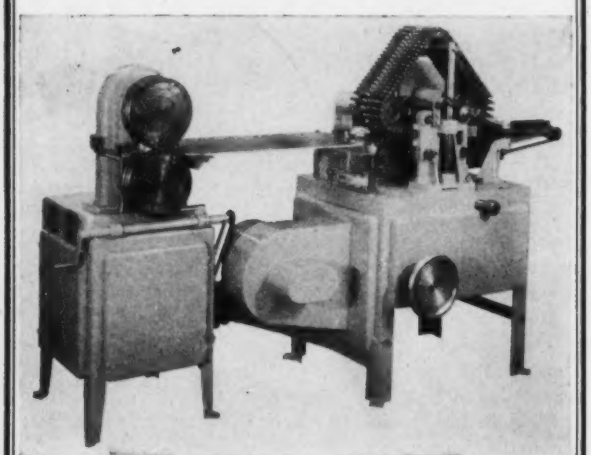
There are various types and makes of dust separators on the market. Perhaps the most common type is the centrifugal type, commonly called "cyclones". These vary in size from large single-cylinder units down to batteries of very small diameter units. The primary advantages of this type of separator are low first cost and low maintenance cost. The main disadvantage (and it is a very important one) is the fact that none of these are so efficient that the finer dust particles do not escape. Usually, dust particles finer than 20 microns are not separated in centrifugal separators. In all cases, the air from cyclone-type separators should be exhausted to the atmosphere. A loss of even one or two percent can create quite a neighborhood nuisance as well as amount to a considerable loss of valuable product.

Also available on the market are many types of wet-type scrubbers used primarily in automotive plants, foundries, etc. As these have no practical application



LATINI DIE POP MACHINE

- Up to 200 pops per minute
- Positive stick insertion
- Wood or paper sticks
- Weight control
- Interchangeable dies



LATINI PLASTIC MACHINE

Production 600 to 1400 pounds per hour.

Extra-duty Chain designed for long service life and guaranteed not to stretch.

Electrically-heated sizer, with variable speed control on sizer and machine proper.

Single and assorted, as well as special die chains are available.

Representative:

John Sheffman, Inc.

152 West 42nd Street New York 18, N. Y.

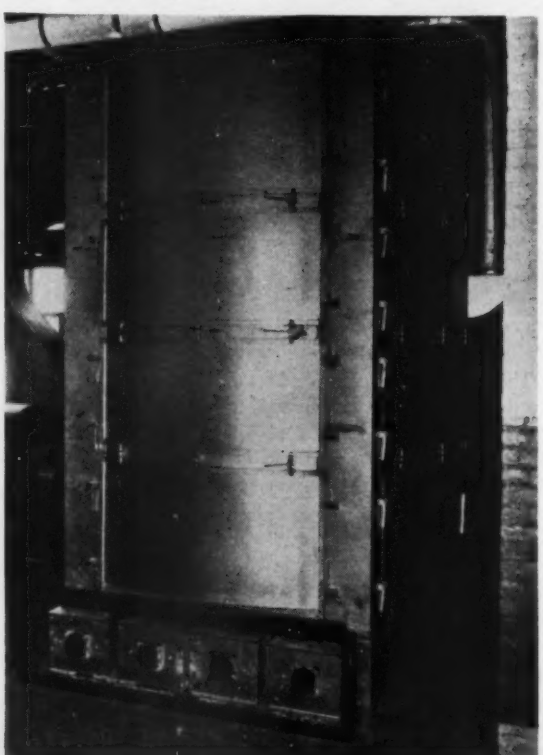
in candy plants, we will not dwell on this type except to say that the efficiency on most types of dust is rather high but there are three distinct disadvantages; the first being the disposal of sludges; the second the waste of considerable quantities of water; and the third, the danger from freezing in most parts of the country.

The electrostatic type of dust separator is not designed for large concentrations of dust but, as a secondary cleaner, is very efficient as it removes even the finest of dust particles. It is not applicable to the confectionery industry, however, due to the danger of explosion in case of short circuiting. Another objection to this type of cleaner is the high first cost.

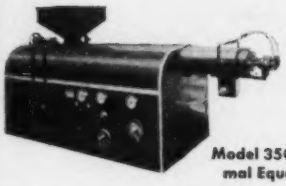
We now come to the type of separator creating a great deal of interest in the confectionery field—the continuous automatic type of filter, using felt as the filtering medium and high-pressure reverse jet air for cleaning.

That dust filters, generally, are not new is a well-known fact, as they have been available for forty or fifty years. Until recently, however, the only type available depended upon rapping devices for cleaning the tubes, which meant the shutting down of filter sections for cleaning. The violent rapping action also prohibited the use of highly effective felt as a filtering medium.

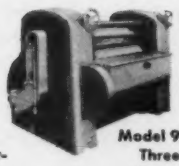
The rapping type filters available were designed primarily for such industries as foundries and cement plants where intermittent operation was satisfactory. Filters for the confectionery industry, however, should perform automatically with constant air volumes. Several manufacturers are now making reverse jet filters under a license of Mr. H. J. Hersey, Jr. This type of filter seems to have met the needs of the confectionery industry where maximum filtering efficiency is important. Due to the



A Day Company dust filter as installed in one of the larger Eastern confectionery plants.

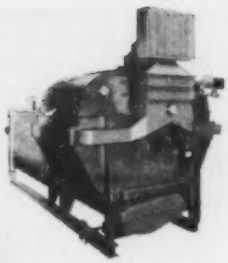


Model 35Q Thermal Equalizer

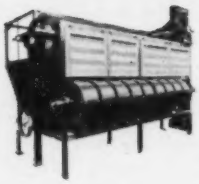


Model 913AC-L Three Roll Liquor Mill

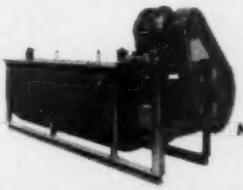
Model 359B Almond Blancher with Picking Table



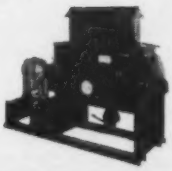
Model 450 Disc Conche



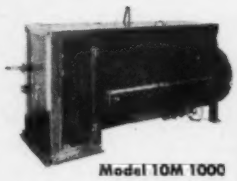
Model 88DSL Cracker and Fanner



Model 40M-U 4000 lb. Emulsifier

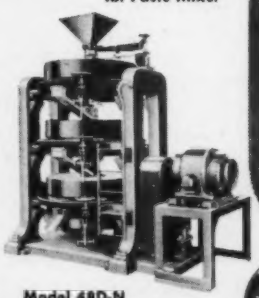


Model 2M-U 200 lb. Emulsifier

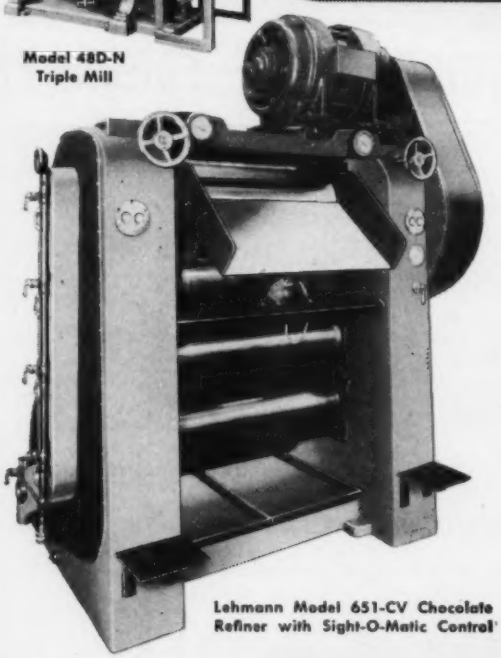


Model 10M 1000 lb. Paste Mixer

Maximum Modernization of Manufacturing Methods can Curb Inflation



Model 48D-N Triple Mill



Lehmann Model 651-CV Chocolate Refiner with Sight-O-Matic Control

INCREASED production, with lowering of costs, is the surest means of keeping inflation in check. This is just as true of the Chocolate Industry as of any other. How to increase output, however, in spite of the increasing stringency in manpower, is the big problem.

The answer, of course, is maximum modernization of manufacturing methods. A large proportion of the machinery in manufacturing plants today is badly out of date. Newer models can increase output and reduce costs.

Inspect the equipment in your plant today and compare it with the latest models available.

Our technical staff is at your service for designing plant and machine layouts utilizing modern facilities for conveying, pumping, automatic weighing and processing of chocolate through its various production stages.

We would like to remind you that a factory reconditioning of any units that may not be performing at top efficiency will reduce operating costs. To insure prompt service in such reconditioning, try to anticipate your needs and advise us in advance, to permit pre-scheduling of your requirements.

LEHMANN

J. M. LEHMANN COMPANY, Inc.

MAIN OFFICE AND FACTORY: 546 NEW YORK AVE., LYNDHURST, N. J.

gentle yet effective cleaning action by air, felt is used as the filtering medium and this allows air to cloth ratios about five times greater than is practical with rapping type filters. This means less filter to be purchased and less floor space consumed to do an equivalent job.

The location of dust control equipment should be given careful consideration. The starch particles, if uncontaminated, can be re-used and this is usually the case when filtered. As it discharges continuously from the filter, it can be spouted or conveyed back to process. If the particles are not usable, then the matter of disposal should be studied.

In warm climates, housed filters can, if desired, be placed on the roof which is an excellent location for returning product as well as saving valuable floor space. In colder climates, however, care must be exercised so as to avoid condensation due to temperature differentials. There are two important conditions to be watched when filtering—one is that the air temperature will not exceed that recommended by the manufacturer, which is usually 180° F. for most types of cloth; the other is that the air within the system does not get chilled so as to reach the dew point creating condensation.

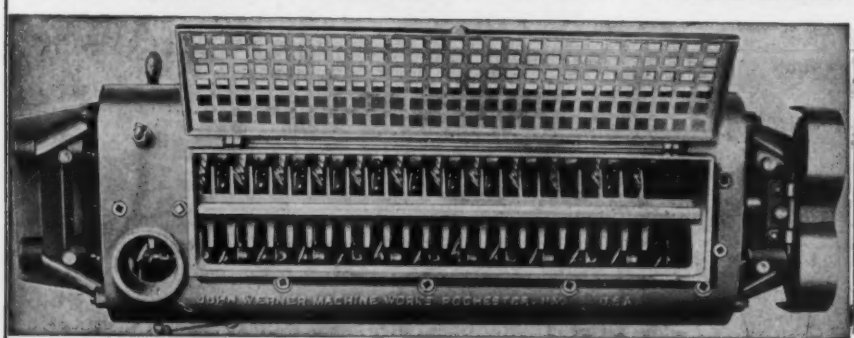
When handling explosive-type dusts, placing the filters in separate rooms is recommended. These rooms should then have explosion panels either through the outside wall or through the roof, if the equipment is located on the top floor of the building.

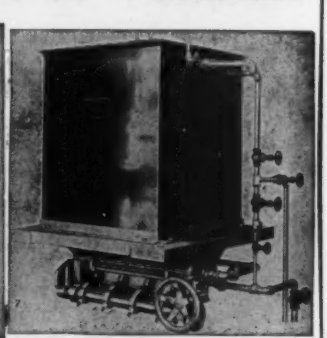
Even with the best of dust control systems, there will be some spillage, etc. which deposits dust on the floor of the plant. For keeping the plant clean, an industrial vacuum cleaner is definitely recommended in addition to the dust control system. Sweeping is very bad practice as this increases the dust particles in suspension.

In considering the purchase of dust control, the following points should be followed:

1. Call in a reputable concern, experienced in engineering, fabricating and installing proper dust control. In this way, there is undivided responsibility. Be careful in your selection as, once a system is installed, it cannot be returned for credit and, if inefficient, it remains so for years.
2. Give consideration to your future plans. If it is planned to purchase additional dust-creating equipment in the near future, it is much cheaper and better to design and install the additional required capacity in the dust control system now than to increase it or put in an additional system in the future.
3. Consider how many machines and which ones are to be used simultaneously. Sometimes, money and power can be saved by proper designing to meet these conditions.
4. Can the separate dusts be isolated and re-used? If so, it is oftentimes practical to put in multiple systems rather than one large one and to use filters which can handle more than one type of dust without mixing. We have seen installations where as many as four different products are handled by one filter, kept separate and each returned to like material.
5. Should the filters be located in a separate room and what is the dust disposal or re-use problem?
6. After receiving bids, consult with your insurance company (Industrial Commissions and City Health Departments also, if required) to be sure the system meets with their approval before purchasing.

THE WORLDS *LOWEST COST* PRODUCER OF FONDANT





2 Cylinder Snow Flake Fondant Beater — Peerless Fondant Cooler

The Greatest name in Fondant Equipment

- Perfect Beating and Cooling, plus super-aeration.
- Frictional heat removal by ventilation and water jacket.
- The Werner "Uniflow Coil" gives uniform cooling, which results in uniform Beating.
- The lowest cost per pound of quality Fondant.
- It's Lifetime equipment.

"There is No Substitute for Experience".

JOHN WERNER & SONS, INC.

713-729 Lake Ave. — Rochester 13, N. Y.

800 Suckers a Minute

300 to 800 suckers per minute is the proud production claim made for the Racine High Speed Plunger Action Sucker Machine.

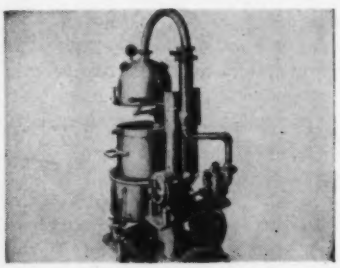
This machine produces large pops with a minimum of weight and can form suckers as thin as ¼" with proper stick coverage. Using wood or paper sticks without additional attachments, the continuous plunger action inserts the stick in the center of the lolly pop.

Equipped with variable speed control, electric motor and easily changed rolls, the Racine High Speed Plunger Action Sucker Machine (Model EP) does not require experienced help for high production.

Additional data on this machine can be obtained from **Racine Confectioners' Machinery Co., 15 Park Row, New York 38, N.Y.**

GAS OPERATED VACUUM COOKER

The type G-2 Simplex Gas Vacuum Cooker shown here is well suited to plants not having facilities for steam. Operating on gas, it comes as one complete unit including vacuum pump and motor, vacuum gauge, gas-fired furnace blower and motor.



With a cooker capacity of from 25 to 100 pounds per batch, the machine is designed for efficient, economical production of fruit drops, stick candies, lolly pops and other types of hard candies as well as quicker cooling of fondant syrup.

Requiring no mechanical knowledge or skill to operate, it has a production capacity of more than 1500 pounds of candy in 8 hours with one pre-melting kettle. With 2 or more pre-melting kettles production can be increased to more than 3,000 pounds.

Additional information is available from **Vacuum Candy Machinery Co., 15 Park Row, New York 38, N.Y.**

The SIMPLEX VACUUM COOKING / COOLING FONDANT SYSTEM

is a real time, money and labor saver!

For many years, producers of all types of cream fondants have praised the performance of the Simplex Vacuum Cooking and Cooling System.

Lower cooking temperatures and quicker vacuum cooling mean a smooth, whiter product, drier and more lustrous—also substantial fuel and water savings. With one 5 foot cream beater you can actually produce 1,000 pounds of fondant per hour with the Simplex process.

Profit by getting the complete production economy story on the Type E-3 Simplex Vacuum Cooking and Cooling System.

FACTS YOU SHOULD KNOW:

- Batches Cooled in 6 minutes!
- Produce whiter, smoother fondant!
- No scraping or washing of beaters!
- Positive Fondant Quality Control!
- Save Floor Space—Increase Output!

VACUUM CANDY MACHINERY CO.
RACINE CONFECTIONERS' MACHINERY CO.

15 PARK ROW, NEW YORK 38, N. Y.

Western Office and Factory: Racine, Wis. • Eastern Factory: Harrison, N. J.

Ziegler to Welcome 92nd Year With

$300,000 expansion program

improvements include huge new chocolate bar machine, kettles and mixing equipment

THE George Ziegler Co., of Milwaukee, is entering its tenth decade with a $300,000 expansion program designed to keep its plant in step with increased business.

With the completion of the expansion program, Ziegler's will have replaced and augmented equipment involved in about half its productive capacity. Started in the spring of 1950, the program has been carried out on a piecemeal basis. It will be largely completed by the end of this year, and is the first major expansion program by the company since 1922.

About half the expended amount went into the cost of a huge chocolate bar machine which occupies two floors of the plant and has been in operation for about a year. The 100 foot long machine melts chocolate in kettles on an upper floor, which is then mixed with nuts, measured out automatically. The mixture then chutes to a lower floor, into a hopper which feeds mold loading pumps. The pumps drop masses of chocolate and nuts into nickled steel molds. The molds are automatically shaken until the mass flattens out, then pass slowly through a chilling compartment. At the other end the molds turn upside down and the bars drop out on a conveyor belt which carries them to the wrapping machines. The machine turns out 20,000 bars an hour.

R. W. Ziegler, executive vice president (left) and his father J. Edmond Ziegler, president, watch the endless stream of bars coming from the new bar machine onto the wrapping tables. The machine is capable of turning out 20,000 bars per hour.

Included in the new equipment are eleven stainless steel cooking kettles, which will add 30 per cent to the firm's cooking capacity; and new cream center mixing equipment and coolers, which will move the filling quickly from the kettles through heat exchangers to "dough mixers" in one continuous operation, thereby replacing current multiple handling.

The marshmallow line is getting more kettles to double its capacity and permit its use for other mixes if needed. While a continuous cooler-mixer operation similar to that in the cream department is also being set up.

In the near future a newly developed casting machine for marshmallow, cream and gumdrop candies will be installed. Also being added is a sander to coat gumdrops with sugar, and a conveyor system to bring creams from the cooling and mixing department to the chocolate coaters. The new coating equipment, which is already in operation, has a capacity double that of the previous machines.

While the program will increase production capacity of the firm, Raymond W. Ziegler, executive vice president, stated, it was motivated considerably by late trends in the candy industry. He pointed out that relatively unskilled labor is becoming increasingly scarce, and that highly mechanized operations are the only way to insure adequate income to candy factory employes.

Ziegler also mentioned that increasing freight rates throughout the country have impelled manufacturers to change their sales emphasis toward a gradual regionalization. He explained that his firm has been expanding into the bulk merchandise field, such as grocery and variety store groups, within its own immediate region.

The Milwaukee firm was founded in 1860 by George Ziegler, in partnership with his brothers-in-law, John and Andrew Boll. In 1873, Ziegler bought out the Boll brothers and took over the business in his own name. Several of its early employes founded candy factories of their own in the Milwaukee area. It is now under the direction of the grandsons and great-grandsons of the founder.

Government Told

Imported Nut Ban

will work hardship on manufacturers

"CONTINUED importation of edible tree nuts in present quantities does not threaten the stability of the U. S. nut growing industry but limitations of such imports would seriously affect the U. S. candy industry," Charles R. Adelson, Delson Candy Co., New York City, testified before the U. S. Tariff Commission September 12. The Commission is conducting an investigation into the present and future effects of imports of tree nuts into the United States, on the trend of prices and on other factors affecting alleged competition between domestic and imported nuts.

Mr. Adelson who spoke as a Director of the National Confectioner's Association emphasized the desire of the consumers for confections containing brazil and cashew nuts not produced in the U. S. as well as the consumer demand for confections containing domestically produced nuts. He gave the following as reasons for asking unimpeded importation of foreign grown almonds, brazil nuts, cashews, filberts and walnuts:

1. The high price of tree nuts has imposed a severe hardship on manufacturers who must use tree nuts because of the established trade names on their packages or bars;
2. The establishment of quotas will result in higher prices for tree nuts;
3. Higher prices for tree nuts will decrease the quantity of nuts used by the confectionery industry.

U. S. candy manufacturers, except for special distinctive flavors and sizes obtainable only in foreign grown nuts, prefer domestic nuts because of uniformity and cleanliness, if they are priced fairly, Adelson stated in his testimony. He pointed out that a survey of candy manufacturers using nuts in candy indicated that any substantial price increase in nut ingredients would "price many nut confections beyond the reach of the consumers."

Mr. Adelson said, "quota restrictions on importation of foreign nuts will raise the prices of domestically grown nuts." Of the shelled nuts consumed in this country, the confectionery industry used 70 percent of the almonds, 40 percent of the brazil nuts, 25 percent of the filberts, 23 percent of the pecans, 20 percent of the walnuts, and 6 percent of the cashew nuts.

• **Chocolate liquor** has been added to the list of commodities whose increased cost may be computed to March 15, 1951, under Ceiling Price Regulation 22, the manufacturers' order, the Office of Price Stabilization said today. Heretofore, the cutoff date has been Dec. 31, 1950.

The change is contained in Amendment 22 to CPR 22, effective Aug. 15.

Amendment 22 adds chocolate liquor to Appendix B or CPR 22, thus permitting cost increases from Dec. 31 to March 15 to be taken into account by manufacturers in determining ceiling prices, OPS said.

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- ***A heavy-duty belt for heavy-duty installations***
- ***Now all BURRELL belts will have this same new, smoother finish for imparting a higher gloss to candy bottoms***

Combining a greatly increased tensile strength, with an even higher finish for better gloss, this invention assures the manufacturer of a longer life—quality improving belt for his production line.

Developed by the makers of the most complete line of cooling tunnel belting in the world, this new Burrell belt represents a great stride forward in belt engineering for the candy manufacturer.

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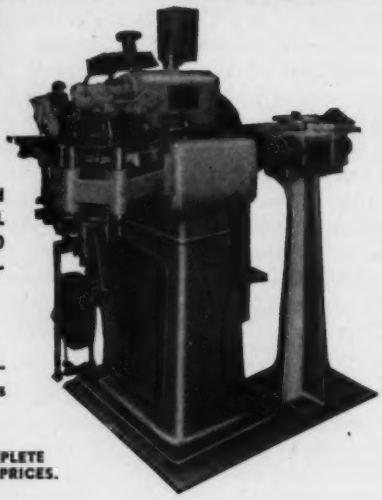
- ★ New high-speed SPECIAL MODEL —wraps 325-450 pieces per minute.

Also available:
Senior Model—wraps 160 pieces per minute.



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New Techniques In Chocolate Seiving

By J. KOCH

Recent development of high speed sieving and straining units for the chemical industries has led to many new applications of such equipment in the production of chocolate, cocoa and confectionery. Until comparatively recently, the extreme difficulty of sieving heavy liquids such as molten chocolate through fine meshes has blocked serious development along these lines and it has only been possible to use very coarse mesh sieves, usually as a simple safeguard against gross pieces of foreign matter finding their way into the finished goods. A range of specially designed high frequency sieving machines is now available which permit of mass sieving of heavy liquids such as chocolate and syrups; typical performances are 10 cwt. per hour of enrober chocolate through a No. 100 sieve (149 micron aperture) and upwards of 2 tons per hour of cocoa butter through a No. 325 sieve (44 micron aperture). Whilst 149 microns is appreciably larger than the average particle size of a well refined chocolate, it is nevertheless an enormous improvement on the No. 10 sieve (2000 micron aperture) which is about the finest practicable mesh for a hand sieve on the same work, and an output of 10 cwts per hour permits incorporation of a fine sieving unit into most chocolate making or using units without the complication of special handling arrangements. In plants where cocoa butter is pressed, the No. 325 sieve is also a welcome alternative to the filter press, as the sieving unit is both cheaper in first cost and also far less laborious in use.

Enquiries are frequently made as to the practicability of sieving chocolate on ultra fine mesh sieves; for instance, if chocolate could be sieved continuously through a No. 230 or No. 270 sieve (62 and 53 micron apertures), it would be possible to substitute closed circuit operation of chocolate refiners for the wasteful open circuit grinding of the typical plant. The answer given by the epxperts who have developed these machines is that the power of the sieving action is such that there is no particular difficulty about getting chocolate to pass through a superfine mesh, but that so far it has never been practicable to make a mesh finer than about 100 which can withstand for long the very considerable forces generated when a heavy fluid is strained through it, so that in practice proposals such as closed circuit grinding can only be considered for the relatively easier operations, for instance the grinding of cocoa nib to a 105 micron standard (No. 140 sieve). For testing purposes, however, where the load is of comparatively short duration, it is quite practicable to sieve chocolate through the finest of meshes, offering an attractive alternative to the microscope for fineness testing, an instrument which can only be used on excessively minute samples (a typical microscope slide of chocolate holds only 0.00002 to 0.00003 lbs. of chocolate, whereas a sieve can be used to test a sample of one to two pounds every few minutes).

The standard sieving machines consist essentially of a special frame carrying a 20″ diameter sieve; to take the

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Manufactured in 3 sizes:

Model "M.11" 110 lbs. capacity
Model "M.14" 220 lbs. capacity
Model "M.16" 440 lbs. capacity
Strong construction
Bottom and rolls in hard genuine granite
Rolls independently adjustable
Noiseless, no vibration, moderate consumption of power.
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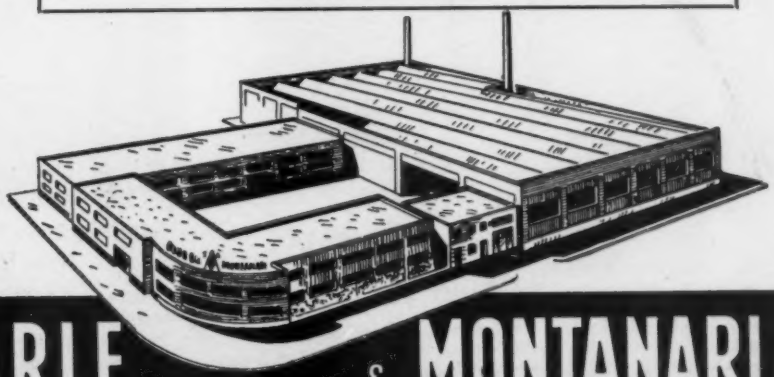

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CANADA REPRESENTATIVE: HAROLD DAVIS & CO.—824 Notre Dame St., West Montreal 3, Quebec.

sieve out and exchange it for another is a matter of a few seconds only. On an application such as the continuous straining of chocolate through a No. 100 sieve, it is usual to take the sieve out and examine it for residue once every 24 hours; in the case of a well processed chocolate, the residue would consist only of the occasional piece of caramelised matter, sometimes also traces of sack wool, brush hairs, minute pieces of metal and so on. For test purposes, however, it is usual to keep an assortment of sieves of all sizes from the coarsest to the finest, as the same vibratory unit can be used for every purpose from testing the break efficiency of a winnower to the fineness of a cocoa powder or icing sugar, or from the purity of a cocoa butter to the micro fineness of a chocolate. Special purpose sieves are also available for such purposes as the blending of chemicals, paints or flavourings, the continuous discharge of bulky residues, the mass filtration of water or process effluents, and so on.

The machines themselves are self contained semi-portable units with a built in electric motor of 1 H.P. or less, according to the duty expected; they are practically noiseless and in fact are often used in showroom and laboratory, as well as on the production line. The sieving power is due to the special motion generated, sometimes described as gyratory turbulence, which it is not practicable to reproduce effectively by hand. Some idea of its effectiveness is given by the claim that powders can usually be sieved at some twenty times the rate per unit area of mesh attainable on a reel sifter, and without the raising of any dust; its effect on the more viscous liquid suspensions is such that hitherto inconceivable straining operations have become a commonplace.

Conventions -- Meetings

October 8-10—American Oil Chemists Society, Edgewater Beach Hotel, Chicago, Ill.

October 13-17—Packaging Machinery Manufacturers Institute, Mid Pines Club, Southern Pines, N. C.

October 15-16—Boston Conference on Distribution, annual conclave, Hotel Statler, Boston, Mass.

October 20—Sweetest Day.

October 22-24—Thirteenth Annual Forum of Packaging Institute, Commodore Hotel, New York City.

October 23—Association of Consulting Chemists and Chemical Engineers, Inc., annual meeting, Belmont Plaza Hotel, New York City.

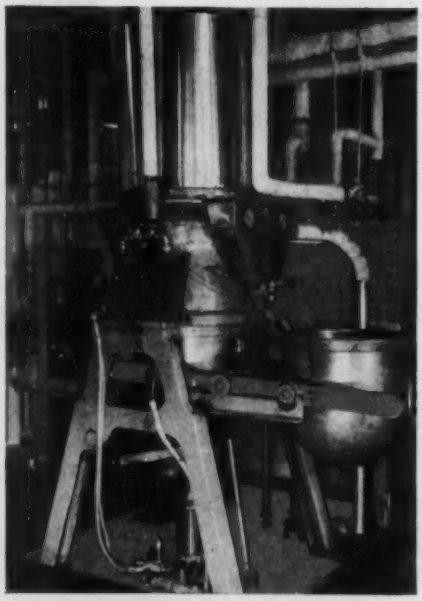
November 12-15—National Automatic Merchandising Assn., Public Auditorium, Cleveland, Ohio.

December 27-29—American Marketing Association, winter conference, Hotel Kenmore, Boston, Mass.

January 14-17, 1952—Plant Maintenance Show, annual exposition, Convention Hall, Philadelphia, Penna.

May 18-20, 1952—National Candy Wholesalers Association, annual convention and confectionery exposition, Palmer House, Chicago, Ill.

July 5-19, 1952—The Food Fair, London, England.



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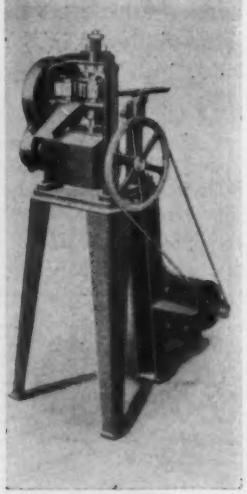
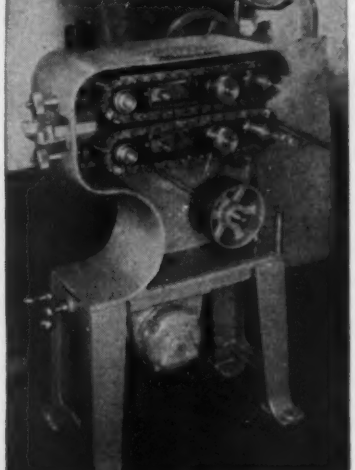
The Candy man's cooker!
"Final Cook" temperature indicator and sight glasses enable operator to always know what he is doing. Simplified controls on cooker and vacuum lend flexibility.



HOHBERGER CONTINUOUS CUT ROCK CUTTER

- Motorized with variable speed drive.
- Complete with 3 sets of knives.



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- Variable speed drive enables spinner to operate at maximum.
- Production: up to 150 feet per minute.
- Positive sealing on filled pieces.
- Forms pillows, straws, and waffles.

Representative: **JOHN SHEFFMAN, INC.** 152 West 42 Street New York 18, N. Y.

What's New in Candy Equipment

The products described help keep you up-to-date on new confectionery equipment, materials of all types. The items below are coded for your convenience. For any further information, write to THE MANUFACTURING CONFECTIONER, *9 S. Clinton St., Chicago 6, Illinois. Use the coupon on page 42.*

Fire Control System

A new carbon dioxide fire extinguishing system has been designed recently. It automatically sounds warning when fire hits, stops motors, shuts off fans, closes doors, and puts out fires. The system is designed for gasoline, oil, varnish, and electrical fires. *Code M7Q50.*

Dry Material Blender

It consists of two equal-diameter cylindrical shells which are joined to form a V. It rotates around a horizontal axis which passes through the geometrical center.

The unit is a unique mixing apparatus for blending dry materials and is unlike any other blender on the market today.

A dust-tight discharge valve is located at the point of the V. Standard access covers with swing bolts and dust-tight gaskets are located at the end of the two legs. If all dust must be avoided while loading, the machine can be set in the inverted V position and fed through the discharge valve at the apex of the V.

Normally the unit is set in an upright position and is charged through either or both the access openings until it is approximately half full. The access openings are then closed and the machine is slowly rotated. When blending is completed, the machine is set in the normal vertical V position, and the material is discharged through the discharge valve. If the unit requires cleaning out after each blend, this is easily accomplished through the access opening. There are no baffles or other obstructions to interfere with easy cleaning or to cause materials to "hang up" and prevent thorough mixing while the unit is in operation.

It ranges in size from 1 to 250 cu. ft. capacity. Based on materials of 50 lb. per cu. ft. density, power requirements range from ¼ to 20 hp. Other drives are available for heavier products. The standard motors are of the integral gearhead type wth a built-in magnetic brake for close control in "spotting" the unit for charging and discharging. *Code M7E51.*

Stainless Steel Oscillating Granulator

A new oscillating granulator of welded stainless steel construction. The hopper has a smooth inside finish for easy cleaning.

This new granulator is so designed that leakage of material is practically eliminated. The part of the hopper which seats the screen has been designed to provide a longer and more accurate seat to prevent material from working around the ends. Furthermore, there are screen end clamps to hold the screen tightly in position.

The gearing is of high strength and the entire drive

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IF YOU have a recurring mold problem, here is a way to get you out of that difficulty without too much trouble or expense—swab your walls with Oakite Bactericide. This fully patented fungicidal agent gives you split-second bactericidal action . . . destroys more microorganisms *faster*. It is easy to use in warm or cold water. And Oakite Bactericide is most economical . . . small concentrations give you plenty of killing power.

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- perfectly balanced for accurate operation

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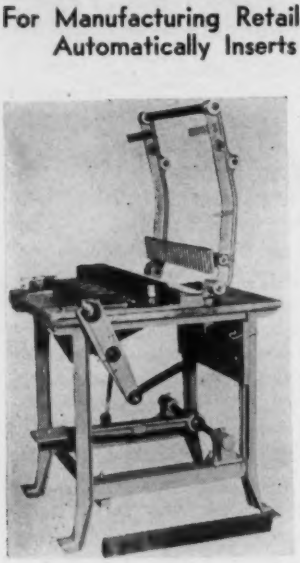
LITTLE WONDER SUCKER MACHINE

For Manufacturing Retailer or Small Operator Automatically Inserts Sticks in Suckers



One Retail Manufacturer says,

"In place of having 8 or 10 girls sticking the lollipops, we now have one man operating the machine doing identically the same job more effectively. We have not found it necessary to change our formula in any way. We feel this machine will pay for itself in a very short time and it has proven satisfactory in every way.

Manually operated—makes 24 suckers in each single operation—inexperienced operator can make approx. 100 suckers per minute—Standard dies—Oval in section—Weight can be varied—Automatic feeding—magazine holds approx. 2000 sticks.

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mechanism including worm, worm gear, crank, segment and pinion is completely sealed in oil, which greatly extends the normal life of these parts.

Other important features of this granulator include motor protection against dust and dirt. This is accomplished by mounting the motor within the granulator housing with only the end exposed for ventilation. A belt guard and starting switches are furnished as standard equipment. The rotor and shaft are splined together rather than pinned, and the rotor is completely polished both inside and out. *Code M7G*51.

A New Simplified All-metal Gyratory Sifter

Designed for sifting dry free-flowing granular products, the new sifter weighs approximately 400 pounds. It is driven by a counterbalanced mechanism which imparts a gyratory motion to the sieves. This motion causes all parts of the sieves to move in identical circles, therefore, all sifting area in the sieves is equally active in effecting separation of different size particles.

A fractional horsepower motor and one Texrope belt are adequate to drive the unit. The driving sheave is located approximately four inches from the floor permitting thorough cleaning under the sifter.

The "Circle" sifter is designed for a stack of three, four or five sieves.

In operation, the sieve stack is gyrated in a 1½ or 2½-inch diameter circle. The operating circle can be changed from one diameter to the other by merely loosening the offset mechanism and rotating it 180°. A simple redistribution of counterweights again places the sifter in properly balanced operation.

Relative motion between the sieve stack and the sifter base is made possible by the flexible rubber mounts on the upper and lower ends of the sieve stack supporting rods. The rubber mounts are designed especially to give the sieves a smooth gyratory motion. *Code M7H*51.

New Light Duty Portable Elevator with Higher Lift

The new unit is a standard model, manufactured on a production basis and priced accordingly. It was developed to meet the need in many establishments for a higher lift in this 500-pound capacity machine. The 7-foot lift increases the height to which materials can be piled; in keeping with the current trend to make more complete use of overhead space. It also gives the elevator a greater range of usefulness for overhead and ceiling repairs.

The other units of this line of production model portable elevators are the "10-Hundred" of 1000 lbs. capacity, and the "20 Hundred" of 2000 lbs. capacity.

Applications include stacking materials, serving storage racks, loading and unloading motor trucks, placing dies in machines or racks, holding long or awkward work pieces for machines, and overhead maintenance jobs. *Code M7I*51.

New Hand Pump Series

Newly designed hand pumps in five series of 7, 10, 14 and 28 gallons per minute capacity, each in several models, are now in production.

The new line, known as Series 210, 404, 414, 828 and 807, is available in models as pump only; with suction and delivery pipes for drums and skid tanks; with return drip-pan for barrel mounting; with refueling hose and nozzle; with floor stand for underground tanks; with brackets for wall or foot mounting; with locking device; and with changes of accessories for most combinations of the above models.

Series 210 is direct drive, 10 g.p.m. capacity.

Series 404 is direct drive, 10 g.p.m. capacity.

Series 414 is direct drive with 8" or 10" crank, and 1" or 1¼" openings for light or heavy liquids for delivery to 14 g.p.m.

Series 828 and 807, to 28 g.p.m., are geared hand pumps for normal or viscous liquids wherever liquids are dispensed from drum-size or larger containers, and for faster hand refueling or defueling.

Series 828, 807, 414 and 404 are swinging vane construction with cam-bored bodies that deliver a nonpulsating flow. Series 210 is sliding vane construction. All vanes are self-adjusting for wear. *Code M7J*51.

The New "Plug-In" Humidity Controller

The Plug-In Humidity Controller fulfills the need for a simple automatic control to operate electrically powered humidifiers and dehumidifiers. Until the present time it has been necessary for the services of a skilled electrician to be employed to install the existing types of controls. This is due to the necessity for running electric lines, for the cutting into of power lines, and for attaching relay boxes to the pilot controls. With this new Plug-In Humidity Controller the necessary electrical work has been done at the factory, and only 3 steps are now necessary:

First: Plug the Humidifier or Dehumidifier into the Control.

Second: Plug the Control into a wall outlet.

Third: Set the dial at the percentage of relative humidity desired.

This is all that is necessary for fully automatic operation.

This controller can handle a load of 15 amps. at 115 v., that is to say a continuous load of 1700 watts, or putting it another way it can handle a goodly number of standard Industrial size electric Humidifiers or Dehumidifiers plugged into it at one time. *Code M4J51.*

Pocket-size pH Meter

A revolutionary pocket-size pH meter and companion probe unit, now available for the first time, permit instant, on-the-spot pH determinations anywhere.

Completely self-contained with batteries, in a bakelite case 3" x 5⅞" x 2½", this instrument is furnished, camera fashion, in an ever-ready case with novel plastic tubes of buffer and KCl solutions. Total weight is 3 lbs. Both water-proof and fungus-proof, the ever-ready case comes with a combination hand-and-shoulder strap, allowing the instrument to be slung over the shoulder or hung around the neck leaving both hands free.

Supports and beakers are completely eliminated by combining the calomel and glass electrodes with the sample holder, in a single polyethylene probe unit. This revolutionary idea of combining the sample holder with the electrodes (Patents Pending) completely protects them and requires a sample volume of only 0.5 ml.

The meter is scaled from 2 to 12 pH for easy reading, and a simple adjustment gives readings from 0 to 14. Accuracy of 0.1 pH is obtainable. Hearing-aid type batteries provide up to 1300 hours of operation. The elec-

Next Month--

CANDY AND YOUR DIET—new findings in the nutritional fortification of confections, by Dr. G. W. Rapp

MATERIAL LOSSES VS. PROFITS—the second in a series on management, by Frank Buese

SWEETENERS AND THEIR USE IN CONFECTIONS—a study of the kinds of sweeteners used in various types of confections in the NOVEMBER issue of THE MANUFACTURING CONFECTIONER

Even devotees of the continuous boiling system have been impressed by the astonishingly simple and faultless operation of our

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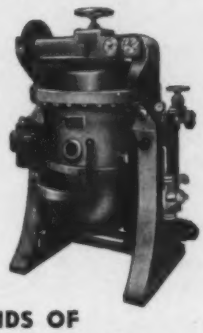
Model SKH

which they are now installing.



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trometer tube, switch and input connector are sealed in a single unit to ensure freedom from high humidity difficulties. The one-knob control and continuous reading features of this instrument simplify operation for untrained personnel. Grounded samples can be directly measured because of no external power connections. The instrument and electrode are completely shielded. *Code M7L51.*

Strip Chart Potentiometer Controller

The electronic "Continuous Balance" operating principle of the controller provides extremely accurate and responsive instruments. Combined with this is the ultimate in pneumatic control mechanisms with its proportional band and automatic reset dials making possible an unparalleled simplicity and fineness of full automatic operation. The strip chart type of controller gives the further advantage of a full eleven-inch calibrated chart width and over 120 feet of chart length. *Code M7M51.*

New Type Pulverizer

A highly efficient impact type pulverizer with screw feed for grinding such products as sugar, dried milk, albumen, various sugar mixtures, spices and many others has been developed. Capacity depends on the product being ground and fineness required. As an example however, this model with 5 H.P. motor will grind granulated sugar at rate of 500 to 700 lbs. per hour to 6X or 4X fineness. For smaller capacity a 3 H.P. motor is used. Many new features are incorporated in this new design and literature describing and illustrating this new machine and it's advantages will be available soon. *Code M4I51.*

Dielectric Moisture Meter

This instrument finds application in many industries, being sold to make rapid, accurate moisture content determinations on a wide variety of products such as: grass seeds, cotton seeds, nuts and many other granular, powdered, or flaked materials. *Code M4E51.*

Circle Coded Items in Which You Are Interested in Getting Literature

Mail to The Manufacturing Confectioner
9 S. Clinton St., Chicago 6, Illinois

M7Q50 M4E51 M4J51 M4I51
M7E51 M7G51 M7H51 M7I51
M7J51 M7L51 M7M51

Name.....

Company.....

Position.....

Address.....

City.....

State..... Zone.....

PATENT GRANTS

Of Interest to Confectionery Manufacturers

MACHINE FOR DEPOSITING NUTS ON CANDY BARS 2,566,712

Louis H. Zeun, Naugatuck, Conn., assignor to Peter Paul, Inc., Naugatuck, Conn., a corporation of Delaware
Application December 15, 1948, Serial No. 65,360
8 Claims. (Cl. 107—7)

In a machine of the character described having means for feeding a plurality of candy bars, a nut hopper having an opening in the bottom for the passage of nuts, a rotatable drum below the hopper and above the path of travel of the candy bars, said drum having in its periphery a plurality of pockets for receiving the nuts, said drum and pockets being movable beneath and in communication with the hopper opening, the improvement which consists of providing suction chambers in the drum communicating with said pockets, and a plurality of radially disposed suction pipes in said drum extending to the suction chambers for sucking the nuts into and holding the nuts in the pockets as the drum is rotated and the pockets move from receiving to discharging position above the candy bars.

CANDY BAR FORMING MACHINE 2,566,586

Frederick E. Soell, Estondale, Mass.
Application April 15, 1946, Serial No. 662,190
4 Claims. (Cl. 107—22)

A candy bar forming machine which includes a hollow slab adapted to support a batch of candy while the latter is in a heated and fluid condition, means to circulate fluid through the slab to regulate the temperature of the candy so as to produce in it a viscous condition that will enable the candy to be cut into separate pieces, a carriage movable longitudinally of the slab, laterally spaced cutting discs carried by the carriage for making longitudinal incisions in candy on the slab when it has attained the desired viscous condition, a screw shaft carried by the slab near one longitudinal side edge thereof, a tiltable carriage movable longitudinally on the screw shaft, spaced cutting discs mounted on the tiltable carriage for movement in unison transversely of the slab for making transverse incisions in the candy, and means carried by the tiltable carriage for moving in unison the cutting discs carried thereby.

WRAPPING MACHINERY 2,550,920

Joseph Arthur Gilbert, Gainsborough, England, assignor to Rose Brothers (Gainsborough) Limited, Gainsborough, England, a British company

Application October 3, 1946, Serial No. 700,975
In Great Britain October 10, 1945
4 Claims. (Cl. 93—2)

A machine for wrapping razor blades or like articles, comprising a cylindrical supporting column, an intermittently rotatable suction transfer member rotatably mounted on said column and slidable thereon in axial directions, said transfer member being formed with at least two feeding members provided with suction passages and each adapted in turn to seize an article by suction contact with its upper surface and transfer it to the machine, the feeding members being so arranged that as one seizes an article another delivers an article, a suction passage in said column, a sleeve valve arranged concentrically with said column between said column and said transfer member, means for reciprocating the sleeve valve on said column for controlling application of suction to said feeding members, means for moving said transfer member alternately in opposite axial directions so as firstly to move it into seizing and delivering

position and then to lift it clear of the source of supply and the machine, means for rotating said transfer member after the seizing of each article to transfer the article to a pocket of a movable pocketed member to which a wrapper has been previously applied, means for folding the wrapper about the article to form a wrapped package, and a detecting mechanism operable at a detecting station between the seizing and transfer stations to detect the absence of a blade from said feeding member and upon such detection to operate a delayed action mechanism for removing from the pocket of the pocketed member at a later stage the empty package resulting from the failure of the feeding member to transfer a blade to the pocket.

WRAPPING MACHINE 2,555,758

Frank Webbley Noble and Donald Charles Baker, Bristol, England, assignors to The Robinson Waxed Paper Company, Limited, Bristol, England, a company of Great Britain

Application May 4, 1948, Serial No. 24,994
In Great Britain May 9, 1947
7 Claims. (Cl. 93—3)

A wrapping machine comprising means for supplying wrapping paper in continuous web form, a platform adapted to receive said paper web and the article to be wrapped, means for forming the paper web longitudinally into a tube, means for propelling the article along said platform and paper web into said tube, means for sealing the longitudinal edges of the web to each other to complete the tube, means for forming two laterally opposed longitudinal re-entrant folds in said tube, means for flattening said tube in lateral alignment with said re-entrant folds to bring opposed portions of the wall of the tube into facial contact with each other, means for sealing said facially contacting portions of the wall of the tube to each other, spacing and gripping means adapted to embrace the flattened portion of the tube and provide end abutments for two longitudinally adjacent articles, and means for longitudinally moving said spacing and gripping means.

CARTON FORMING MACHINE 2,551,186

Louis Veyret, Neuilly-sur-Seine, and Georges Geffroy, Paris, France, assignors to La Cellophane, Paris, France, a French company

Application December 31, 1947, Serial No. 794,981
In France October 21, 1944
Section 1, Public Law 690, August 8, 1946
Patent expires October 21, 1964
2 Claims. (Cl. 93-51)

An apparatus for forming folded open top cartons which are tight to a predetermined level from flat rectangular blanks, comprising a flat plate adapted to receive the blank, said plate having a rectangular opening corresponding to the bottom of the carton and defined by side edges spaced by the width of the bottom of the carton and extending beyond the length of said bottom to the full width of the blank, converging edges extending from the ends of said first edges to the ends of said bottom and transverse edges joining said converging edges and extending along the ends of said bottom to form a pair of triangular openings at each end of said rectangular opening suited to fold side end flaps, side guide plates extending downwardly from said side edges of said first plate to receive the folded carton therebetween, and vertical inverted U-shaped end folding member attached to said transverse edges of said first plate with vertical legs depending below the surface thereof and spaced from said side plates for the passage of the side end flaps therebetween, a piston having a rectangular cross section corresponding to the bottom of said carton adapted to pass through said rectangular opening for forcing the blank therethrough and a pair of folding members mounted below each of said end folding members to fold the side end flaps against said piston for forming the ends of said carton as the piston advances, sealing means cooperating with said piston to seal the folded end flaps and means to strip the folded carton from said piston as the piston is retracted.

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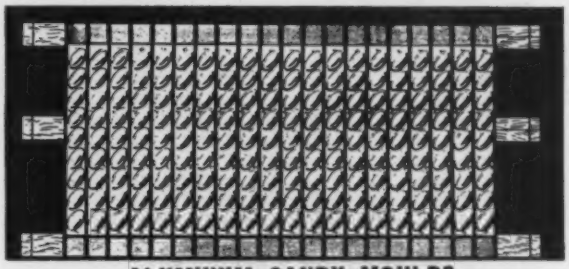

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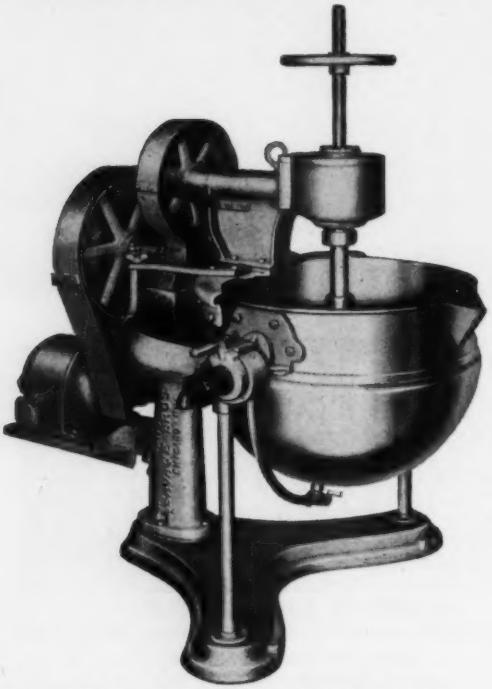

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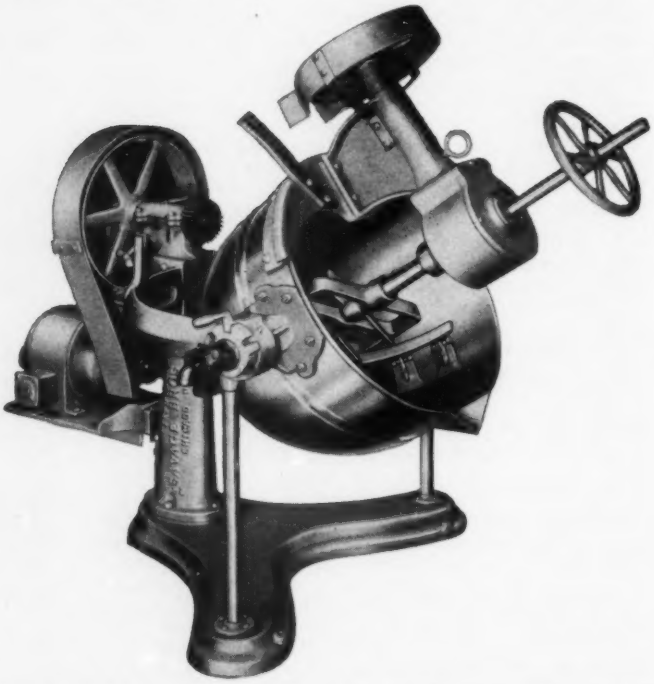

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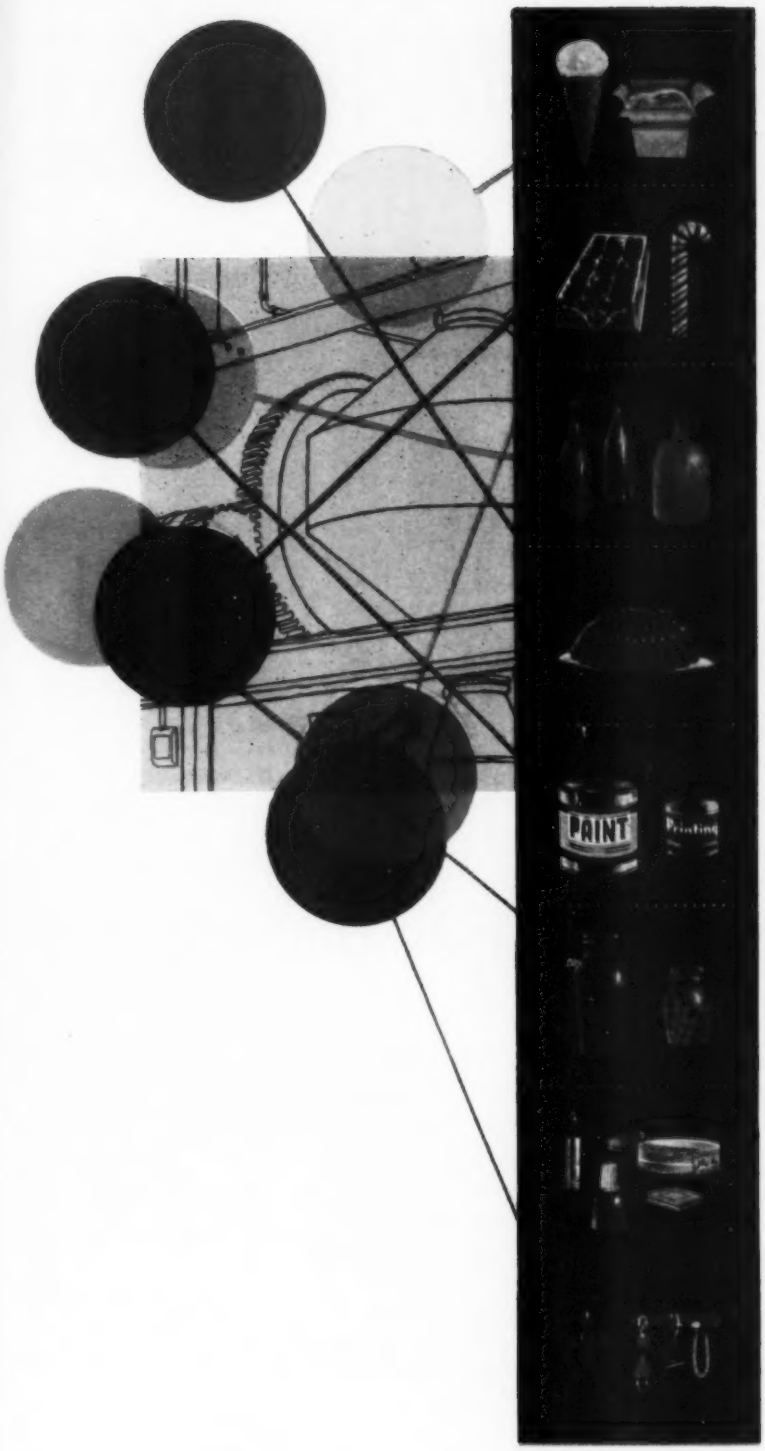

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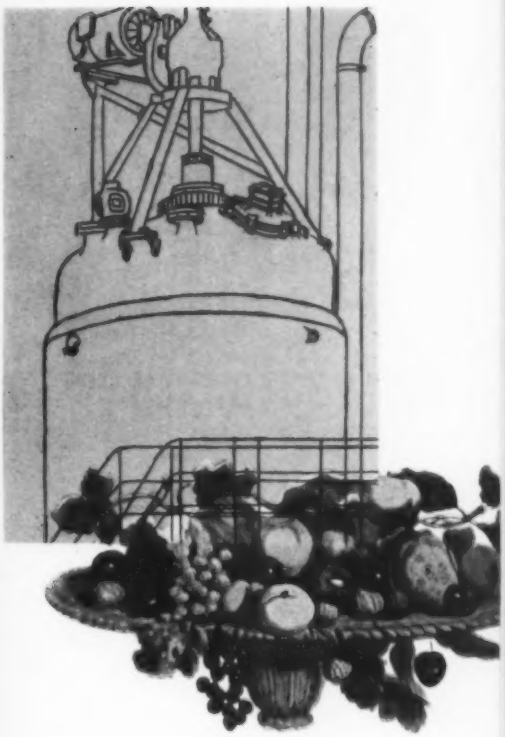

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The MANUFACTURING CONFECTIONER'S

Candy Clinic

The Candy Clinic is conducted by one of the most experienced superintendents in the candy industry. Some samples represent a bona-fide purchase in the retail market. Other samples have been submitted by manufacturers desiring this impartial criticism of their candies, thus availing themselves of this valuable service to our subscribers. Any one of these samples may be yours. This series of frank criticisms on well-known branded candies, together with the practical "prescriptions" of our clinical expert, are exclusive features of The MANUFACTURING CONFECTIONER.

British and European Candies

Code 10A51
Assorted Chocolates
& Bon Bons
4 ozs.—1S 4½d.

(Purchased in London)

Appearance of package: Fair.
Box: Folding box, white printed in red. Cellulose band.
Appearance of box on opening: Poor.
Number of pieces:
Dark Coated Chocolate: 5.
Crystalized Bon Bons: 2.
Unwrapped Caramels: 2.
Sugar Coated Almond: 1.
Chocolates:
Coating: Fair.
Centers:
Cream & Jelly: Fair.
Fudge: Fair.
Nut Nougat: Fair.
Nut & Almond Paste: Had a scrap taste.
Coffee Cream: Fair.
Bon Bons: Hard and dry.
Unwrapped Nut Caramel: Fair.
Nut Nougat, Cellulose Wrapper: Fair.
Chocolate Panned Hard Candy Drop: Poor.
Sugar Almond: Poor.
Remarks: Quality of coating and centers is poor. Flavors are of the cheaper kind. The candy was not good eating.

Code 10C51
Chocolate Bar
50 Gr. Price 45 Centime

(Purchased in Switzerland)

Appearance of Bar: Good.
Size: Good.
Wrapper: Inside foil wrapper. Outside paper band printed in red, embossed in gold.
Chocolate: Dark eating chocolate.
Color: Good.
Texture: Good.
Taste: Good.
Remarks: The best chocolate bar of this kind we have examined in a long time. Very fine chocolate.

Code 10J51
Assorted Chocolates—Shell Type
No weight stated
Price 360 francs

(Purchased in a variety store, Paris)

Appearance of package: Fair.
Container: Folding box, dark brown, gold printing. Imprint of dancing girls in red. Outside wrapper of white paper tied with a gold cord; round gold seal.
Appearance of box on opening: Fair.
Number of pieces:
Dark Coated: 10.
Light Coated: 7.
Coatings:
Colors: Good.
Gloss: None.
Shells: Good.
Taste: Good.
Dark Shell Centers:
Cream: Very hard; poor flavor.

Candy Clinic Schedule For The Year

The monthly schedule of the CANDY CLINIC is listed below. When submitting items, send duplicate samples six weeks previous to the month scheduled.

JANUARY—Holiday Packages; Hard Candies
FEBRUARY—Chewy Candies; Caramels; Brittles
MARCH—One-Pound Boxes Assorted Chocolates up to $1.00.
APRIL—$1.00 and up Chocolates; Solid Chocolate Bars
MAY—Easter Candies and Packages; Moulded Goods
JUNE—Marshmallows; Fudge
JULY—Gums; Jellies; Undipped Bars
AUGUST—Summer Candies and Packages
SEPTEMBER—Bar Goods; 5c Numbers
OCTOBER—Salted Nuts; 10c-15c-25c Packages
NOVEMBER—Cordial Cherries; Panned Goods; 1c Pieces
DECEMBER—Best Packages and Items of Each Type Considered During Year; Special Packages, New Packages

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Filbert Paste: Fair.
Light Chocolate Paste: Good.
Jelly: Could not identify flavor.
Nuts & Chocolate Paste: Good.
Nut Paste: Good.
Glace Pineapple: Good.
Chopped Hard Candy Brittle & Chocolate Paste: Good.
Fruit Paste: Fair.
Lighted Coated Pieces:
Fruit Paste: Fair.
Coffee Caramel: Good.
Filberts: Poor; nuts were soft.
Fruit Paste & Nuts: Fair.
Light Chocolate Paste: Fair.
Dark Chocolate Paste & Nuts: Fair.
Assortment: Fair.
Remarks: The quality of these chocolates was not up to standard of the chocolates sold in the U.S.A. We doubt if the American consumer would purchase the second box.

Code 10B51
Filled Hard Candy—Plastic Type
No weight stated
Price 340 Fr.

(Purchased in Milan, Italy)

Appearance of Package: Good.
Container: Cornucopia shaped. Light white board embossed in gold. Name and emblem embossed in gold and red. Tied with gold twine. Outside paper wrapper, overall gold imprint of horses.
Hard Candy: Each piece in printed cellulose wrapper.
Jacket: Thin but grained.
Center: Sponge hard candy and coffee.
Color: Good.
Texture: Good.
Flavor: Good.
Remarks: One of the best plastic coffee hard candy pieces we have examined. Good eating and a true coffee flavor.

Code 10D51
Chocolate Marron Bar
50 Gr. Price 45 Centime

(Purchased in Switzerland)

Appearance of Bar: Good.
Size: Good.
Wrapper: Inside foil and paper wrapper, outside paper band. Red printed in green and orange.
Bar:
Chocolate: Light.
Color: Good.
Texture: Good.
Taste: Good.
Remarks: The best chocolate bar of this kind we have examined in some time.

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Code 10F51
Assorted Chocolates & Bon Bons
No. weight stated
Price 2S 2d.

(Purchased in a variety store, London, England)

Appearance of Package: Cheap looking.
Container: White board folding box printed in red. Cellulose band.
Appearance of box on opening: Poor.
Number of Pieces:
Dark Coated Chocolates: 8.
Crystalized Bon Bons: 5.
Crystalized Jelly Square: 1.
Crystalized Coconut Square: 1.
Unwrapped Caramels: 2.
Nut Nougat—Cellulose wrapped: 1.
Nut Roll Slices: 3.
Chocolates:
Coating: Dark.
Color: Fair.
Gloss: Poor.
Strings: Fair.
Taste: Fair.
Centers:
Vanilla Cream: Tough and lacked flavor.
Pink Cream: Tough and rank flavor.
Orange Cream: Tough.
Vanilla Caramel: Grained.
Almond Paste: Fair.
Mint Cream: Tough cream, lacked flavor.
Coconut & Fruit: Fair.
Bon Bons:
Color: Good.
Jacket: Good.
Crystal: Good.
Centers: Hard and dry.
Jelly Square: Could not identify flavor.
Caramels: Grained.
Nut Nougat: Fair.
Coconut Square: Dry and hard.
Nut Roll Slices: Rancid taste.
Assortment: Poor.
Remarks: The quality of this candy is of the cheapest kind. The candy would sell in the USA for about 30c a pound.

Code 10G51
Assorted Chocolates
½ lb. Price 2S 6d.

(Purchased in a chain variety store, London, England)

Appearance of package: Cheap looking.
Box: Folding type, white board printed in red and brown. Cellulose wrapper.
Apperance of box on opening: Poor.
Number of pieces: 23.
Coating: Dark.
Color: Good.
Gloss: Dull; some pieces bloomed.
Strings: Fair.
Taste: Fair; very greasy.
Centers:
Dark Cream: Could not identify flavor.
Cream: Tough; could not identify flavor.
Chocolate Paste: Fair.
Dark Jelly: Could not identify flavor.
Vanilla Caramel: Partly grained.
Nut Brittle: Good.
Orange Colored Cream: Perfume

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flavor.
Coffee Cream: Poor cream, good flavor.
Orange Cream: Poor cream, good flavor.
Pink Cream: Could not identify flavor.
Mint Cream: Fair.
Assortment: Fair.
Remarks: Quality of centers is of the cheapest kind. Cream centers are tough, flavors of the cheapest quality. This type of chocolates would sell in the U.S.A. at about 30c the pound.

Code 10E51
Milk Chocolate Coated Caramel Rolls
No Weight stated
(4½c)

(Manufactured by John Mackintosh & Sons Ltd., Halifax, England. Purchased in a Stewart & Co. store, London, England)

Roll: Contained 9 round caramels dipped in milk chocolate.
Wrapper: Inside wrapper of gold foil, outside band of brown paper printed in red and white.
Roll:
Coating: Good.
Center:
Color: Good.
Texture: Good.
Taste: Good.
Remarks: A different kind of package. Quality very good.

Code 10H51
Filled Hard Candy—Plastic Type
No weight stated
Price 60 Francs

(Purchased in a candy store, Paris)

Appearance of Package: Fair.
Container: Cellulose bag, overall green polka dots, name in green.
Hard Candy: Each piece wrapped in a printed cellulose wrapper.
Color: Good.
Jacket: Grained.
Center: Mint jelly.
Color: Good.
Texture: Good.
Flavor: Good.
Remarks: This would be a good eating piece of hard candy if the jacket was not grained.

Code 10L51
Milk Chocolate Nougat and Caramel Bar
No price or weight stated

(Purchased in a variety store, London, England)

Appearance of Bar: Good.
Size: Good.
Coating: Good.
Center:
Color: Good.
Texture: Good.
Taste: Good.
Remarks: This type of bar should be a good seller. Bar was of good quality.

Code 10M51
Milk Chocolate Coated Caramel & Fudge Bar
No weight or price stated

(Purchased in a variety store, London, England)

Appearance of Bar: Good.
Size: Good.
Wrapper: White paper wrapper printed in red and blue.
Coating: Good.
Center:
Color: Good.
Texture: Good.
Taste: Good.
Remarks: A well made bar and good eating.

Code 10K51
Triangle Shaped Milk Chocolate Nut Bar
No price or weight stated

(Purchased in Switzerland)

Appearance of Bar: Very different.
Container: Triangle shaped light board tube, buff color, embossed in gold and red. Chocolate wrapped in foil.
Chocolate bar:
Chocolate: Very good.
Color: Good.
Texture: Good.
Taste: Good.
Remarks: The best milk chocolate almond bar we have examined in some time.

High-temperature Chocolate

result of teamwork between manufacturers and Quartermaster Food and Container Institute

By H. B. COSLER

THE desired stability for operational rations is two years at temperatures of from −70° to 100° F. with at least six months of this period at 100° F.

This has imposed a difficult problem for the makers of the candy components of the rations. It eliminates any candies coated with chocolate. Due to poor acceptability of so called "summer type" coatings, made with higher melting fats replacing cocoa butter, these were also eliminated. A special solid chocolate bar of low cocoa butter content was developed but this was not too satisfactory, as at 100° F. it was almost impossible to remove the wrapper and consume the bar as a bar. At that temperature the consistency was more like a pudding, and on cooling, extreme bloom developed.

The industry is familiar with the work at Lehigh University, sponsored by the Pennsylvania Manufacturing Confectioners' Association, on emulsifiers in chocolate, particularly sorbitan monostearate and polyoxyethelene sorbitan monostearate. In the summer of 1950 Dr. K. T. Farrell, chief of the General Products Division of the Food and Container Institute, and Mr. J. J. Alikonis, of the Paul F. Beich Co., working in conjunction, conceived the idea that these emulsifiers might be the solution to the problem of higher melting fats in coatings. Working on this theory, experiments were made at the Beich Company using these and other emulsifying agents. Surprising and satisfactory results were obtained by the use of sorbitan monostearate and polyoxyethelene sorbitan monostearate in equal proportions.

By December 1950 these experimental coatings were developed to the point where we were sure that they would meet the stability requirements of the Armed Forces. The problem remaining was the development of the best formulations.

The candy specification was due for completion by February 1, 1951 for all types of candy. Although much preliminary work has been done, many problems as to assembly and revision remained, one of which was the formulation of a coating. Shortness of time did not permit as much experimentation on this as would have been desirable. In early January 1951 a meeting was held with three local candy manufacturer-members of the Quar-

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termaster Specification Committee of the National Confectioners Association—who produce their own coatings. The representatives of these manufacturers were Mr. J. J. Alikonis, of the Paul F. Beich Co., Dr. George Huss, of the Curtiss Co., and Mr. Otto Windt and Dr. Charles E. Rimpilla, of E. J. Brach & Sons. Tentative formulations for "cocoa type" coatings were worked out and they produced small amounts of these coatings in their plants, also coating various bars with them. These coated bars were tested at the Food and Container Institute and two of them proved to be the most satisfactory, namely the dark type and the light type. These two formulas were incorporated in the specifications which were published in February 1951.

A large procurement of bars based on these specifications, was made in March 1951. Due to the limited time in developing the coatings, and the lack of experience in large scale manufacture, we awaited with some apprehension the reaction of the manufacturers. There were surprisingly few problems. The manufacturers obtaining contracts were very cooperative in giving information to us and to others as to their procedure. As a result the Armed Forces are receiving coated candy bars in their rations which not only meet the stability requirements, but give them a far greater variety than they have received in the past. This also greatly increased the number of candy manufacturers who can bid on ration procurements and increased the acceptability of candy in the rations.

With a temporary solution to the bar coatings in hand, the next problem to attack was the solid chocolate bar. Cocoa butter and higher melting fats have never been compatible in chocolate. It was conceivable to believe that the use of the same emulsifiers might overcome this problem. A Chocolate Committee had previously been appointed and had been working closely with the Food and Container Institute on chocolate ration bars. Only one member of this committee was producing high melting fat coatings on a commercial scale. They were asked (and gave ready cooperation) to make up various formulations of chocolate bars. We finally arrived at one which met every physical stability requirement and, somewhat to our surprise, received an appreciable higher acceptability rating in a large taste testing panel than did the bar being used in the rations. At a meeting of the Chocolate Committee in April, the members were given the formulation of this new bar and asked to make up samples in their plants. The resulting bars confirmed our previous tests. The new candy specification now being processed, will contain this formulation, which is as follows:

Component	Percent by Weight
Chocolate Liquor adjusted to 54% fat	49.50
Sugar	17.00
Whole Milk Solids	16.00
Added Fat (113° F + or −2°)[1] (With not over .6 percent Lecithin)	16.50
Soribitan Monostearate	.50
Polyoxyethelene sorbitan monostearate	.50
Thiamin hydrochloride (Vitamin B_1)	
Salt and Vanillin	.12 milligrams per ounce of finished product according to good commercial practice

Consumers buy...

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make your candies with

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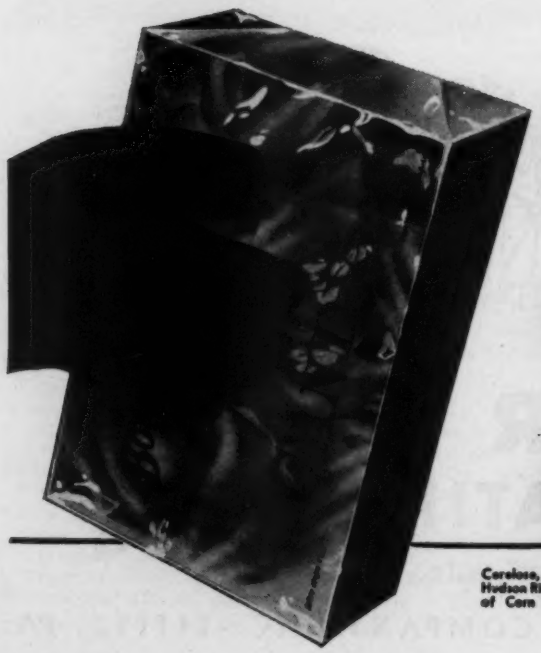

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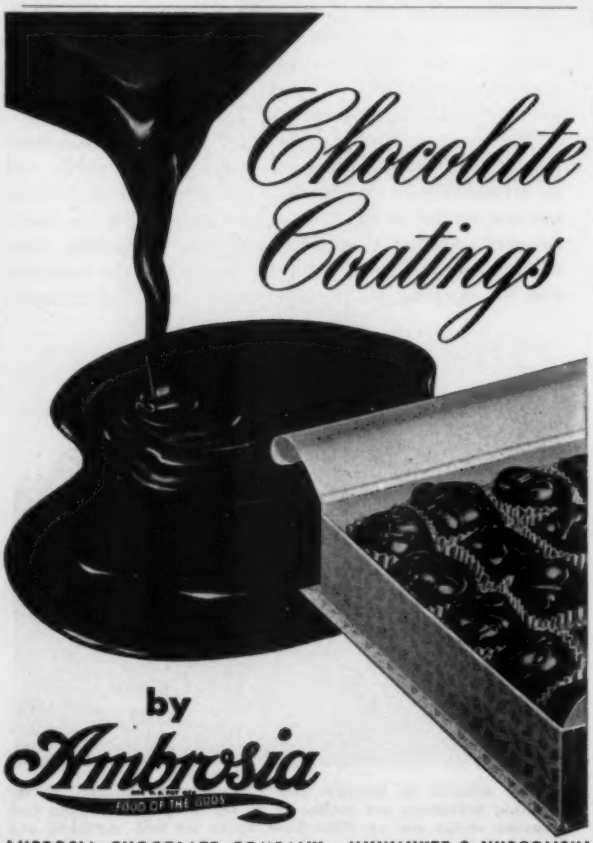
Cerelose, Puritose, Globe, Buffalo and Hudson River are registered trade-marks of Corn Products Refining Company, New York, N. Y.

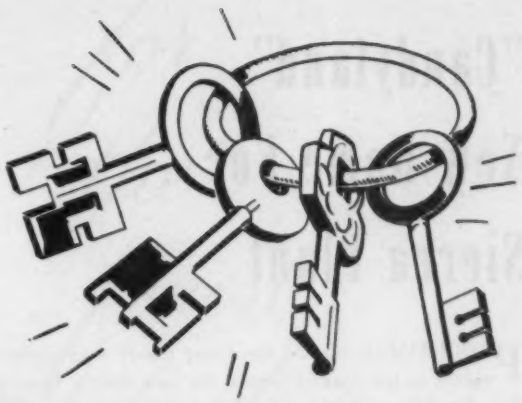
Work is being continued on the improvement of this bar.

With such satisfactory results established in the compatibility of cocoa butter and high melting fats, it would seem just as practical to improve the coating in the same manner, i.e. by the use of chocolate liquor in place of cocoa powder. It is a known fact that in processing, cocoa powder loses some of the flavor characteristics of the original liquor. A coating made with chocolate liquor is superior in flavor to one made with cocoa powder even though the same liquor is used to make cocoa powder. We are at present experimenting with coatings made with chocolate liquor and high melting fats in place of cocoa powder. Unfortunately, these experiments have not progressed to the point where they can be incorporated in the new specification. We have reason to believe that they will be successful. Additional experiments will be underway in the near future with the use of even higher melting point fats in both the coatings and solid bars. The present bar coatings made on the specification formula and solid bars made on the above formula are very satisfactory at a temperature of 100° F. and fairly satisfactory at a temperature of 110° F. They show no evidence of bloom when stored at these temperatures then cooled to 70° F. We are desirous of making coating and bars that will prove as satisfactory when stored at 120° F.

This is a brief history of the development of solid bars and coatings. We believe it to be of interest to the industry as eventually it may be of great commercial value. Considering that this has all been accomplished within the span of one year, we believe it to be an outstanding example of cooperation between the Food and Container Institute and the confectionery industry.



AMBROSIA CHOCOLATE COMPANY • MILWAUKEE 3, WISCONSIN



FOUR KEYS TO GREATER PROFITS!
with General Mills B-2455 Wheat Starch

You save—and profit—four tangible ways when you use General Mills B-2455 wheat starch in your gum candies.

Here's how:

1. INCREASED YIELDS UP TO 3%—at no increase in production costs. That's clear profit!
2. REDUCED NEED FOR FLAVORING MATERIALS—You save by using smaller amounts of expensive flavoring materials. None is needed to cover the taste of B-2455 wheat starch—it *has* no cereal taste—odorless, too!
3. LONGER SHELF LIFE—B-2455 helps keep your candies fresher—longer—with no loss in quality! Your outlets can stock more—you profit more!
4. NO SWEAT TENDENCY—Moist stickiness means lost sales. Avoid this loss with B-2455 wheat starch!

General Mills B-2455 wheat starch does more: it increases the clarity—the tenderness—the melt-in-your-mouth qualities that are so important to you. *Thin-boiling* B-2455 wheat starch is highly purified and modified, has high water absorption and retaining qualities.

General Mills B-2455 wheat starch can increase your profits—and meet your high standards of quality. Investigate it today—and profit!

General Mills Paygel Wheat Starch

If you make caramels, nougats, investigate General Mills Paygel wheat starch! This excellent thick-boiling starch gives you outstanding results. Chemically modified and highly purified, Paygel is produced under precise laboratory controls—is a proven performer under exacting conditions.

Free samples of B-2455 and Paygel wheat starches are available without obligation. Write or wire

General Mills, Inc.

Special Commodities Division

400 2nd Ave. So. Minneapolis 1, Minn. | 80 Broad St. New York 4, N. Y. | 208 S. LaSalle St. Chicago 4, Ill.

"Candyland" New Home For Sierra Plant

PROCLAIMED one of the finest candy manufacturing plants in the United States, the new Sierra factory in San Francisco swung into full production this month, commemorating the twenty-fifth anniversary of the company. The new plant, which aptly has been christened "Candyland", is located at 101 Broadway and is rated the largest candy factory west of the Mississippi.

Organized in 1926 by Theodore A. White, directing head, the company began its business career with one copper kettle and a purposeful idea . . . to manufacture high-quality candy for popular price selling. Specializing in chocolates and hard candies, the company's quality products gained favor by leaps and bounds necessitating enlarged facilities on a cycle of every five years. In due time gums and jellies were added, then chocolate panned candies and today Sierra manufactures the most complete line of chocolates and candies in the West. So extensive and varied are its candy products that some 135 different units of candymaking machinery are needed in their manufacture.

Theodore A. White, directing head of Sierra Candies, San Francisco.

Sierra "Candyland" is functionally designed to incorporate advanced production methods utilizing modern candy making machinery. Specially designed heating, ventilation and refrigeration systems have been employed to keep temperatures under constant control for uniformity of product and to produce chocolates and candies under the most ideal manufacturing conditions.

Over two years were spent in perfecting plans and building the new factory. Besides modern candy making machinery every facility has been employed for the general welfare and betterment of Sierra candy craftsmen. Lighting, safety precautions, first-aid, fire protection, modern sanitary methods, rest and lunch rooms—all have been given special attention to promote the most harmonious working conditions.

Mr. White in speaking of the progress made by the company stated—"We are indeed extremely proud and happy with our new Sierra "Candyland". It is an achievement and an outstanding example of American enterprise made possible through the loyalty of our thousands of customer-friends.

Manufacturing in "Candyland" starts on the fourth floor where batteries of cookers, kettles, ovens, mixing, kneading and forming machines and equipment are arranged in a streamlined manner to expedite every operation. On the third floor are the huge Moguls, drying and heat room, polishing, crystalizing, sugaring and sugar pan departments. On the second floor where chocolates and candies are developed into their finished state, are large chocolate coating machines; the hand-made, dipping, and packaging departments. Every phase of operation is supervised by expert candy makers.

The first floor, besides containing very commodious administrative offices, also houses the shipping and receiving departments, finished goods, machine shop and boiler room. On the "subway floor" are huge liquid sugar and corn syrup tanks and hundreds of raw material stocks used in the manufacture of the various Sierra products. Excellent transportation facilities have been provided consisting of spur track and truck-level loading and unloading docks. Tank rail cars are unloading by gravity direct to the storage tanks on the subway floor—and then the liquid sugar and corn syrup is piped to the various departments located on the third and fourth floors.

One passenger and two large freight elevators provide access to all floors. All of the large candy making machines are conveyor equipped; and adjustable conveying units transport products from machine to machine, and thence to packaging departments. The factory's manufacturing areas have been designed with unobstructed, wide-span aisles to enable electric transporters to operate freely. The machine shop is fully equipped with all the necessary machinery to make repairs quickly and to avoid lengthy shut-downs.

The official opening of Sierra "Candyland" has been set for late October when customers and the public will be invited to view the details of operation and observe the modern manner in which chocolates and candies are manufactured. At that time a comprehensive brochure commemorating the twenty-fifth anniversary of the company and the opening of its new factory will be distributed.

The exterior of Sierra's new "Candyland" factory. Manufacturing operations are conducted on top three floors, offices and shipping rooms are on main floor, tanks for raw materials are located in the basement.

for the finest foods... the finest colors

National

CERTIFIED

FOOD COLORS

Only by integrated production from basic raw materials to intermediates to finished colors can purity and uniformity be completely controlled. The uniform pure-dye strength, solubility and brightness of shade in National Certified Colors are a direct result of precise chemical control at every step in the manufacturing process. No higher standards of quality can be consistently maintained.

CERTIFIED COLOR DIVISION

NATIONAL ANILINE DIVISION

ALLIED CHEMICAL & DYE CORPORATION

40 RECTOR STREET, NEW YORK 6, N. Y.

BOSTON PHILADELPHIA CHICAGO CHARLOTTE SAN FRANCISCO PORTLAND, ORE. TORONTO

A Digest of

Technical Literature

World-wide developments and research in confectionery and food processing techniques are noted for confectionery manufacturers.

Spectrophotometric Sugar Studies

F. W. Zerban, Louis Sattler, James Martin, Analyt. Chem., Vol. 23, *No.* 2 (1951).

These studies were made on refined sugars in solution. Transmittancy of 60% solutions filtered through Celite Analytical filter aid of 76 different sugars was measured at 20 points from 325 to 825 wave lengths. The 560 wave length was found satisfactory.

Essential Oils and Related Products

Ernest Guenther and Edward E. Langenau, Analyt. Chem., Vol. 23, *No.* 2 (1951).

A review article which mentions the high lights of the past year. The 14th edition of the U. S. P. contains many monographs of interest to the trade. The 9th edition of the Nat. Form. also includes monographs on essential oils.

Food

John R. Matchett, Analyt. Chem., Vol. 23, *No.* 2 (1951).

This review paper contains important information on moisture methods, protein and amino acids, metallic ions, fats, enzymes, carbohydrates, vitamins, and spoilage and contamination of foods.

Taste Differences in Foods

Elsie H. Dawson and Elsie F. Dochterman, Food Technology, Vol. 5, *No.* 2 (1951).

Paired and triangle difference tests and ranking and scoring tests to measure differences in certain quality characteristics of foods are discussed to determine the comparative precision of the method and panel. Chocolate fudge with and without vanilla was one food product tested. The triangle test seems to be most acceptable. Vanilla fudge met with greater favor than plain fudge.

Recent Studies on the Explosibility of Cornstarch

Irving Hartmann, Austin R. Cooper, and Murray Jacobson, Bureau of Mines, Report of Investigations 4725, *U. S. Dept. of the Interior* (1950).

This publication (free) belongs in every candy factory. This investigation indicates that a high moisture content in the starch reduces its explosion hazard; coarse size fractions are much less explosive than finely divided starch; and oil treatment of calcium carbonate added reduces the explosibility. It is still necessary to emphasize all precautions in handling large quantities of starch such as the elimination of all igniting sources, the prevention of dust clouds, and provision of explosion pressure relief vents in the plant.

Nestlé's Snowcap®
New Light Milk Coating

DISTINCTIVE MILK FLAVOR!
(Not Chocolate)
Ingredients: Milk • Cocoa Butter
Sugar • Flavoring
Use the same as Milk Chocolate Coatings—Write for Samples
Nestlé's Chocolate Company, Inc.
60 Hudson St., New York 13, N. Y.

Proven in the Candy Field
DESICCITE #25
prevents moisture damage
Manufactured by FILTROL CORPORATION
General Offices: 727 West Seventh Street, Los Angeles 17, California

Ferbo CAKE FLAVOR
A Ferbo Specialty Flavoring that imparts a Rich and Delicious taste characteristic of a mixture of Butter and Cream and Caramel and Vanilla. Used extensively by both the Bakery and Confectionery trades. Sample upon request.
PRODUCERS AND PACKERS OF FOOD SPECIALTIES
THE Ferbo Co.
GREEN VILLAGE N J
MANUFACTURERS OF FINE FLAVORINGS

Unique Packaging

The "Korn Krib" replica of Mary Dodge's trade mark is reproduced in a clever package, handy for re-use as a cigarette or costume jewel box.

Builds a Nation-wide Business

Mary Dodge started out with a small store, but with big ideas that have paid off with a steadily growing volume of sales.

For those interested only in the taste of her confections, Mary Dodge uses a small variety of stock set-up boxes, each bearing her name and trade mark. Most foreign shipments are made in these boxes.

A unique product, ultra-smart packaging and clever merchandising are the ingredients leading to the outstanding success of "Mary Dodge—Completely Different Confections."

Starting from a tiny pop-corn shop in Studio City, California, "opened to help our oldest boy when he finished school," the Mary Dodge enterprise has grown to five-figure volume size, with sales throughout the world.

Harry Dodge, Jr., "our oldest boy" decided upon bigger things when he finished school than the popcorn business, however, and Mrs. Dodge found herself left in charge. She remembers that period as a "long, hard grind; making what was sold, trying to sell it and looking after two other schoolboys at the same time."

Mrs. Dodge realized that to succeed, she would have to make and sell something different and better than her competitors. She remembered that her mother used to tell her, "You'd eat nails if they were covered with chocolate." So she set out to try chocolate on popcorn.

everyday

metal containers are proving their worth more and more to the merchandiser and consumer.

the durability of a metal container alone saves packaging grief in "breakage" when shipping and handling.

freshness, as well as keeping a product dry, also, are great facto in the growing popularity of m containers.

our ability to create new de at your disposal, or your p design can readily be ada our line of containers.

stock sizes in plain and lithogr designs also are available.

brochure and quotations sent upon request.

OLIVE CAN COMPANY
MANUFACTURERS OF PLAIN AND LITHOGRAPHED CANS
450 NORTH LEAVITT STREET CHICAGO 12, ILLINOIS

The method was finally perfected and patented, and "Choc-co-pops" were introduced to the candy trade.

She followed up this success with "Confetti Crunch", a candied popcorn in an assortment of colors and flavors—lemon, cinnamon, peppermint, wintergreen and caramel.

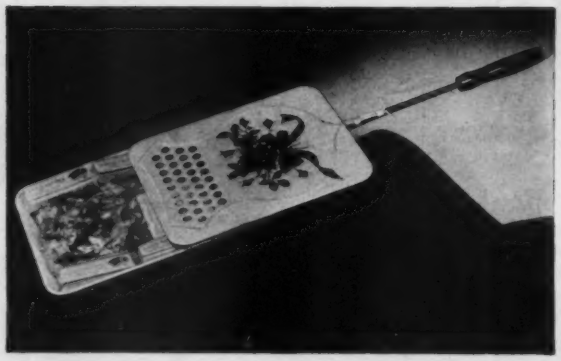
The next step was to widen her field of customers. Taking the license numbers from "nice looking cars", she obtained the names of the owners from the state capital. After that, she says, the little business began to grow through the use of a mail-order booklet and word-of-mouth advertising by satisfied customers. The little business soon expanded from the Studio City shop and factory, to include the Mary Dodge Korn Krib stand in Los Angeles' famous Farmers Market. Today Mary Dodge popcorn candies are also sold in select stores in various cities and orders are shipped to foreign lands.

The third ingredient in the Mary Dodge success story —ultra-smart packaging—evolved from a keen sense of the wide range of customer desires. Mary Dodge confections are packaged in a wide variety of containers—ranging from simple, stock, waxed cardboard tubs to ceramic dishes. Thus the customer has an ample opportunity to select whichever package best suits their taste. Those who wish only to savor the confections and are shopping only for themselves, are usually content with one of the low-cost paper cartons, but those who "want something different", for gift or the re-use value of the container, are glad to pay the extra cost. It is to satisfy this latter group, who are seeking a little more than just candy, that Mary Dodge has developed her unique range of packages.

One distinctive package utilizes her "Korn Krib" trademark. A hand-made, wooden reproduction of an old-fashioned corn crib, 8 x 4 x 4 inches contains the merchandise, and the roof is removable to form the lid. It has re-use value as a cigarette or general utility box.

Another idea is a pyrex baking dish, overwrapped with cellophane and set in a white, baked-enamel, metal holder, and hand-decorated with a green, silver, or gold design.

One of her outstanding packages is an aluminum bowl set. The candied popcorn is packed in each bowl, over-



An old-fashioned popcorn popper serves as a utilitarian and appropriate package for Mary Dodge's popcorn confections. The popper is decorated on top and sides with red rose decals.

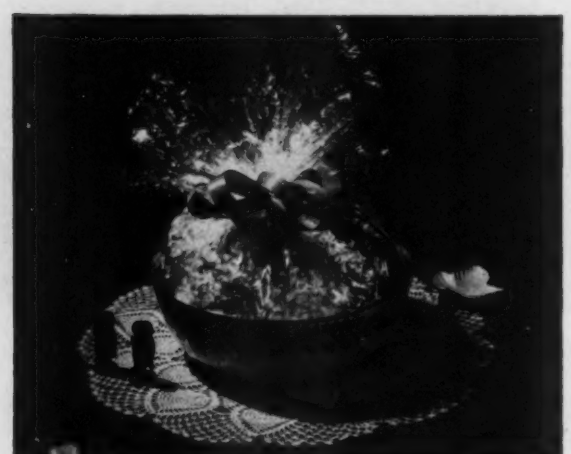
wrapped with cellophane and tied with colored ribbons. The set includes a large salad or serving bowl and four smaller individual bowls. All are white enamel with hand-decorated leaf design in gold, silver or green. They are sold as a set, or may be purchased individually.

One clever package was made from an old-fashioned hand popcorn popper with a sliding top. This also is white enameled and decorated with red rose decals on the top and sides. It contains a functional and decorative re-use value.

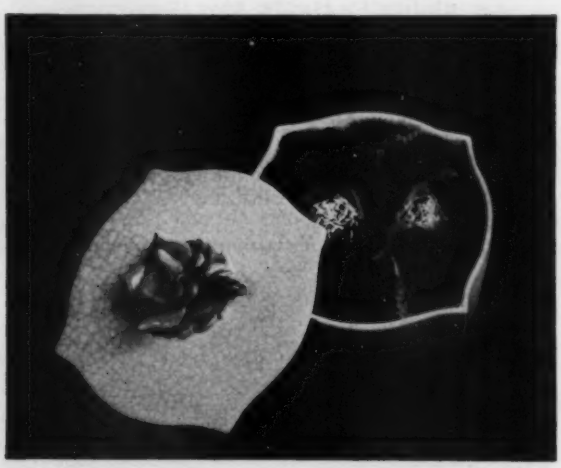
Less expensive, but just as eye-catching, are colorfully filled set-up boxes of transparent plastic sheeting. These boxes, available in 1½ lb. and 11 oz. sizes, are tied with multi-colored ribbons, forming large flowing bows on top.

For her rapidly growing mail-order business, Mary Dodge uses various sizes of sturdy telescoping and rectangular set-up boxes. The candies inside are packed in moisture resistant cellophane. Each box features her name and the colorful "Korn Krib" motif.

Of special pride to Mrs. Dodge is the notice that her packages have brought from others in the candy and popcorn trade. The growing success of her personalized enterprise is itself a tribute to her faith in a quality product, attractively packaged and appetizingly displayed.



A large aluminum bowl, white enameled and decorated with gold, silver or green leaf design, is packed with "Confetti Crunch" and overwrapped with cellophane to form another distinctive Mary Dodge package.



Ceramic bowl, with decorative rose on top, is one of Mary Dodge's more expensive packages. A variety of confections are placed in the dish, which has a valuable re-use value.

In this small floor space you can make

BIG SAVINGS ON CARTON COSTS

If you are now buying finished cartons or blanks that you set up by hand, you can't ignore the striking savings a Palmer Carton Former offers.

In only 3' x 6' of floor space, this remarkable machine turns out up to 102 perfectly formed, tightly glued cartons per minute. Savings on carton material costs *alone* often pay for the machine in less than a year.

The only attention it requires is to keep it supplied with blanks. Since the machine's magazine holds from 500 to 1,000 blanks, depending on the style of carton, one person can attend to feeding and do other useful work besides.

Due to its advanced design, the Palmer operates on the principle of *continuous motion*. Gluing time is nine times greater than in other machines, in spite of its high speed. Its specially designed mandrels and forming plates result in greater accuracy, permitting perfect registration of printed matter on sides and ends of cartons. And it's easily adjustable for different sizes.

The Palmer can be adapted to produce virtually any type of single or double-walled carton. Therefore, no radical change need be made in your present style of carton in order to benefit by the Palmer's savings.

One of our Palmer Carton Formers in the plant of the Hollywood Candy Company, Centralia, Ill.

Learn how leading manufacturers are saving money on their cartons.

Write for literature on the Palmer

PACKAGE MACHINERY COMPANY
CARTON DIVISION
SPRINGFIELD, MASSACHUSETTS
NEW YORK CHICAGO BOSTON CLEVELAND
ATLANTA DALLAS DENVER LOS ANGELES
SAN FRANCISCO SEATTLE TORONTO MEXICO, D. F.

the best candy sells better in holiday wraps

Successful Package Creations like these are real seasonal sales-stimulators. A proven way to make consumers gift-conscious, these attractive wraps colorfully printed by Shellmar quicken impulse sales . . . boost profits all along the line.

Shortages and allocations have limited the use of decorative wraps this season, soon, however, we hope that increased production of fabricating materials will make these wrappers available to all. Meanwhile, it's well to remember that Shellmar "everyday" wraps can help sell your candy faster. Whether you package in boxes, bags, or multiple units, a Shellmar Packaging Counselor is as near as your telephone.

Shellmar Products Corporation • Mt. Vernon, Ohio

Shellmar
"Successful Package Creations"

Plants: Mt. Vernon and Zanesville, Ohio
South Gate, Calif. • Mexico City
Medellin, Colombia • Sao Paulo, Brazil

The Hallmark of Successful Package Creations

Confectioners' Briefs

• **Thomas F. Corrigan,** sales manager of the Nestle's Chocolate Company, Inc., has announced the appointment of Fred C. Baldwin as Divisional Sales Manager of the Southern District. The divisional sales responsibilities of Mr. Baldwin include the states of Alabama, Florida, Georgia, North Carolina, South Carolina, Oklahoma, Tennessee and Texas. Mr. Baldwin joined Nestle's Chocolate Company in 1934.

In his new capacity as Division Manager, Mr. Baldwin will be assisted by J. E. Gentry of Atlanta, Georgia, in the southeastern states, and H. W. Sternberg of Houston, Texas, in the southwestern states.

• **Aleck Abrahamson** has been appointed Vice-President in charge of Sales for the Chunky Chocolate Corp. of New York, according to an announcement by Jeff Jaffe, president of the company. Mr. Abrahamson held a similar position with the Sweets Company of America with whom he was associated for over twenty years.

Popularly known as "Tootsie Roll Aleck", he has a very fine following among the candy, tobacco, drug and grocery fields, as well as chain operators.

• **Isadore M. Margolies** of 1675 Forty-eighth Street, Brooklyn, president and co-founder of Bard & Margolies, Inc., candy manufacturers and distributors, died Thursday night at Mount Sinai Hospital after a brief illness. His age was 64.

A native of Brooklyn, Mr. Margolies had been in the candy business forty-five years. He founded the company that bears his name forty-two years ago.

• **Max Sherman** has been named assistant to the national sales manager of Peter Paul candies and will be responsible for sales operation in eleven Western states.

• **"Baron" Michele Leone,** better known for his feats in the TV wrestling ring, has announced that he is enlarging his battle area. He's going to become a manufacturing confectioner. The "Baron", who says he's the World's Heavyweight Wrestling Champion, is going to open a factory at San Gabriel, California, for the manufacture of "Vitamized Lollipops". He says he is interested in seeing that children get plenty of healthy vitamins, and for incentive, the handles of each lollipop will contain pictures of the "Baron" in various fighting poses.

in 50 years
WE'VE LEARNED...
THE IMPORTANCE OF LONG LASTING FRESHNESS
THE EYE APPEAL OF A COLORFUL CAN TO YOU
THE SALES VALUE OF A RE-USABLE CAN
This is Our Fiftieth Anniversary
A HALF CENTURY OF METAL PACKAGING
1901
1951
THIS is the fiftieth year of Service to Heekin customers in expert color lithography and metal packaging . . . in contributions, sales-wise, to the confection industry. The Heekin organization, old in experience — young in ideas, is at your service.
HEEKIN CANS
THE HEEKIN CAN COMPANY, CINCINNATI 2, OHIO

Do you believe in Santa Claus?

YOU WILL when you see how much faster your merchandise sells packaged in **HANDI-PULL** drawstring bags. You can combine various items in your line for a "special" by packing them in these bags.

Your customers can use them over and over again for many uses.

Children young and old will get a thrill seeing these Santa sacks hanging from the Christmas tree. Available in three standard sizes—8½" x 12"—10" x 16"—12" x 18" or other special sizes you may need.

Write to: Department MC

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NEW YORK 3, N. Y.
PAPER CO., INC.

MERCKENS

Makers of Fine Chocolate

MERCKENS CHOCOLATE COMPANY, INC.
BUFFALO, NEW YORK
BRANCHES AND WAREHOUSE STOCKS IN
BOSTON, NEW YORK, CHICAGO, LOS ANGELES, OAKLAND, SALT LAKE CITY, SEATTLE

• **Ed MacKinnon Smith,** Topps Chewing Gum representative in Michigan and Indiana has been named Central Division Sales Manager according to an announcement made today by Phil Shorin, vice-president in charge of sales.

Mr. Shorin has indicated that this is the first in a series of sales department personnel changes designed to make it possible for the Topps organization to work in closer cooperation with their jobber and chain store accounts.

• **V. H. Gies,** Vice-President and Director of Sales and Advertising of Mars, Incorporated, announces the appointment of B. A. Bouchard to the position of General Sales Manager, C. A. McDonough will succeed Mr. Bouchard as Eastern Sales Manager.

• **Old Dominion Candies, Inc.,** of Roanoke, Va., has started work on a new $80,000 factory building. The new plant will replace the present building, which will continue to serve as a sales outlet. The building will be constructed of cinder block and steel, covering 20,000 square feet of floor space.

• **J. Waldo Whitfield,** for the past several years top salesman for Morse Wholesale Co., Houston, Tex., has joined the sales staff of the Chase Candy Co., and now represents Chase in Houston and the adjoining territory.

Mr. Whitfield was with the Morse organization for 17 years.

• **Norris Candy Company** representatives from all parts of the U. S. attended a three day sales meeting at the home office in Atlanta, Ga., July 16, 17, and 18.

Included in the meeting were addresses by A. M. Mullens, vice president of Nestle's Chocolate Co., Peter Forsman, vice president of C. H. Forsman of Donahue & Co., New York advertising agency. & Co., and Jack Rosenthal, merchandising director

• **Walter F. Ratoff,** Sales & Advertising Manager of The Maillard Corporation, announces his resignation effective September 1, 1951.

Mr. Ratoff, has been associated with Maillard's for the past 20 years. During the last 15 years in his present capacity.

VANILLIN
ZIMCO® LIGNIN VANILLIN U. S. P.
A Natural Source Vanillin Originated and Manufactured in the United States.
A Finer Vanillin of Exquisite Aroma.
Consult your flavor supplier
Sterwin Chemicals Inc.
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445 Lake Shore Drive, Chicago 11, Ill.
FACTORY: ROTHSCHILD, WISCONSIN

Supply Field News

• **F. M. Carrier & Son,** 515 S. Peters Street, New Orleans, La., has recently been appointed brokers for the Wilbur Suchard Chocolate Company, Inc., of Lititz, Pennsylvania, according to an announcement made by Charles S. Grube, vice president in charge of bulk sales for the Lititz company.

Carrier will represent the Wilbur Suchard Company for bulk chocolate sales to the manufacturing confectionery, industry in Louisiana, eastern Texas and southern Mississippi.

• **The Walter Baker chocolate and cocoa division of General Foods,** has made three executive sales changes. Daniel E. Hegarty, formerly assistant to the general manager, has been appointed general sales manager. Andrew C. Quale, who joined Baker in 1945 as sales and advertising manager for grocery products, has been named bulk sales manager, succeeding Mr. Hegarty. Peter C. Wood, with the company since 1948, has been promoted from associate sales manager of confectionery products to sales manager.

• **Merckens Chocolate Company, Inc.,** of Buffalo, has moved into its new plant at 155 Great Arrow Avenue, Buffalo 7, N. Y. The new telephone number is VIctoria 5225.

Merckens was formerly located at Seventh and Jersey streets for a period of 30 years. The new plant is located on the fringe of the residential district, on part of the grounds used for the Pan-American Exposition. The building is of reinforced concrete construction, with large bays and high ceilings, and is double that of the space formerly occupied. Adjacent to the building is a twelve-car siding on the New York Central railroad. A double truck bay will accommodate seven large trailer trucks and an equal number of smaller units, all at the same time.

The move was made as the company felt it had outgrown its older quarters. It was made during the summer with scarcely any interruption of trade service.

• **Frank J. Schleicher,** president of the F. J. Schleicher Paper Box company, passed away on August 24th at the age of 92. Mr. Schleicher was one of the first set-up paper box manufacturers. He organized his company in 1904 and has always specialized in fancy candy boxes for the confectionery trade.

He is survived by his widow, three daughters, and four sons, Louis H., Frank H., Allen K., and Lawrence S. Schleicher, who are actively engaged in the business and will continue its operations.

• **Shellmar Products Corporation** has created two new executive staff positions in its Shellmar Division as a part of its program of strengthening and integrating administrative procedures.

W. L. Moore has been named Administrative Coordinator, and T. R. Baxter has been designated as New Products Manager. Both will be responsible directly to Vice President and General Manager Warren E. Hill.

• **Raisin-Thiebaut, Inc.,** San Francisco, one of the west's oldest makers of set-up paper boxes, has been purchased by R. P. Bemiss and W. E. Jason, president and vice president, respectively, of Bemiss-Jason Co., San Francisco, manufacturer of boxes and packaging papers.

Raisin-Thiebaut will continue to be operated as a separate company, making boxes for candy, gifts, cosmetics and general merchandise.

CONFECTIONERY BROKERS

New England States

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Confectionery
Office and Sales Room
161 Massachusetts Ave.
BOSTON 15, MASS.
Territory: New England

Middle Atlantic States

JAMES A. BRADY CO.
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Concentrated coverage of the candy and food trade in N. E. Penna. "The Anthracite"

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Terr: Penn., N. Jersey, Balt., Wash.

HERBERT M. SMITH
318 Palmer Drive
NO. SYRACUSE, NEW YORK
Terr: New York State

IRVING S. ZAMORE
2608 Belmar Place
SWISSVALE, PITTSBURGH 18, PA.
29 Years Experience
Terr: Pennsylvania, excluding city of Philadelphia

South Atlantic States

JIM CHAMBERS
Candy Broker
84 Peachtree Street
ATLANTA 3, GEORGIA
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Territory: Kentucky and Tennessee

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Over 20 years in this area.

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Terr: Eleven Western States

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383 Brannan Street
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Territory: State of California

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CANDY PLANT MANAGER: Experienced administrator and production man, technical background seeks executive position with Eastern plant. Excellent references. Box 10111, **The MANUFACTURING CONFECTIONER.**

POSITION WANTED as Superintendent or assistant to Plant Manager. Am 44 years old, worked in responsible positions in large and small candy plants in the U.S.A., Germany, France, England, and South America. Have gained varied and practical experience over the past 28 years in candy and chocolate production, operation of machinery, and plant layout. Speak English, German, French, and some Spanish. At present employed on temporary basis, therefore available on short notice. Will go anywhere, U.S.A. or abroad. Box 913, **The MANUFACTURING CONFECTIONER.**

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When addressing box numbers, please address as follows:
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Classified insertion requests are sent to the same address. Rates are 35c per line of regular type; 70c per line for bold face or capital letters; $6 per column inch for display. Minimum insertion is three lines. Rates are not subject to agency discounts.

POSITION WANTED (contd.)

ALL-ROUND CANDYMAKER: retail or wholesale desires work at once. Box 816, **The MANUFACTURING CONFECTIONER.**

CANDY FOREMAN
or SUPERINTENDANT
Eighteen years experience in all kinds of candies, modern machinery. Specialized in chocolate and hard candy production. Knows how to handle help efficiently, has set up plants, excellent recommendations. Box 912, **The MANUFACTURING CONFECTIONER.**

MACHINERY FOR SALE

MACHINERY FOR SALE: 4" cream beater, complete, chain drive, 3 LP motor, single phase, best offer; 12' candy case, prime wood, slightly used; typewriter; 4 door file; 5 ton air-conditioner—Chrysler, slightly used; large desk. In Chicago. Box 1015, **The MANUFACTURING CONFECTIONER.**

FOR SALE: Only $1.00 each for 630 steel Starch Trays, 16-½" x 33-½" x 1-¾", excellent condition. Fanny Farmer Studio, 900 No. Third St., Minneapolis, Minn.

MACHINERY FOR SALE (contd.)

FOR SALE: Anderson Expeller; 5-roll Refiner; 2 Read 2000 lb. Mixers with motors; Bullerjahn Starch Drier; 2 Roasters Box 10113, **The MANUFACTURING CONFECTIONER.**

FOR SALE: Package Machinery LP and LP 3 Sucker Wrappers. Adjustable for various sizes and shapes of suckers. In fine operating condition. Box 1016 **The MANUFACTURING CONFECTIONER.**

FOR SALE: Package Machinery DF bar wrapper in fine condition. Box 1017, **The MANUFACTURING CONFECTIONER.**

FOR SALE: ALMOST NEW DUBIN FIRE MIXER—A-C 3 Phase Motor, F.O.B. San Francisco. Box 10115. **The MANUFACTURING CONFECTIONER.**

FOR SALE: Package Machinery Co. FA2Q Wrapper. In fine condition. Can be inspected. Box 1018, **The MANUFACTURING CONFECTIONER.**

FOR SALE: U. S. Automatic Cartoning machine for 5c hard candy box, set up wax-line fill. Must be sold immediately. Box 1019, **The MANUFACTURING CONFECTIONER.**

The MANUFACTURING CONFECTIONER'S Clearing House

(Continued)

MACHINERY FOR SALE (Contd.)

FOR SALE: 32" Enrober; 90° Economy Belturn 32" wide; Steel Mogul; Drier & Cooler with Wolf Starch Reel. Box 10114, **The MANUFACTURING CONFECTIONER.**

FOR SALE: 5-foot Ball Beater; 24" Enrober; Triangle Bag Fillers; AD Wood Mogul; Huhn Drier & Cooler with elevators, sifter, all 3-phase motors, and controls. Box 10112, **The MANUFACTURING CONFECTIONER.**

FOR SALE: 1 Glenn Mixer #160, with mixing bowl and beater. New, in original crate.
1—Suttons Steel and Steel Peanut Cleaner. New, in original crate.
1—Batch Roller, used.
1—Ferguson-Haas Salt Water Cutting and Wrapping machine. Used, but in fine condition.
Melster Candies, Inc., Cambridge, Wisconsin.

MACHINERY WANTED

MACHINERY WANTED: Racine Mode M. Sucker machine. Give lowest price and condition. Box 1012, **The MANUFACTURING CONFECTIONER.**

MACHINERY WANTED: Interested in purchasing a used Simplex Gas Vacuum Cooker. Advise condition and lowest price. Box 1013 **The MANUFACTURING CONFECTIONER.**

MACHINERY WANTED (Contd.)

WANTED: Chocolate Melting and Tempering Kettle; Chocolate Rabbit Moulds. State age, model number and price. Box 1011 **The MANUFACTURING CONFECTIONER.**

MACHINERY WANTED: Racine Model M. Sucker machine. Underwood Candy Company, P. O. Box 4851, Atlanta, Ga.

BUSINESS FOR SALE

BUSINESS FOR SALE: In Chicago. Retail. Doing approx. $3000 monthly. Combination candy kitchen, soda fountain, grill. Everything brand new. $15,000 investment. Selling for personal reasons. Box 1014, **The MANUFACTURING CONFECTIONER.**

FOR SALE: Business and equipment of complete candy and ice cream manufacturing plant, with retail store, newly remodeled—fountain and all store equipment new last November. Good lease. Also do wholesale business in city limits. 20 years' successful business. O. K. Candy Shop, Sonora, California.

WELL ESTABLISHED BUSINESS on one of the busiest corners in vicinity of Buffalo, N. Y. Luncheonette, home made candy, soda fountain; modern front; latest of all equipment, only three and half years old. Small, new, modern candy factory and ice cream plant in building connected to store. Wholesale and retail, long lease. Gross sales last year, $145,000 and increasing each year. Legitimate reason for selling. Reply to I. Powsner, 17 Court St., Buffalo, N. Y.

BUSINESS FOR SALE (Contd.)

FOR SALE: Candy Factory, medium sized. Old established, well-equipped. Full information on request. Write Matzger Chocolate Co., 780 Harrison St., San Francisco, California.

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WANTED: Second and closeouts of candy, gum and allied lines. Send samples and prices. No lot too small. D & B Rated. Philadelphia Sales Co., 1023 Spring Garden St., Philadelphia 23, Pa.

MANUFACTURER of high grade Chocolate Coatings interested representation as additional line with experienced salesman or broker having established clientele and acquaintance with candy manufacturers south central territory, Memphis to New Orleans.

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Cellophane rolls in outer boxes 100 ft. or more

ALSO MADE OF OTHER CELLULOSE FILM

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Scotch Tape Clear & Colors

Diamond "Cellophane" Products

Harry L. Diamond Robert L. Brown

"At Your Service"

74 E. 28th St., Chicago 16, Illinois

News of Associations

• **The American Oil Chemists' Society's** 25th annual fall meeting, to be held at the Edgewater Beach hotel in Chicago, October 8-10, will feature a total of 50 papers on varying aspects of the industry. The papers will be presented in several concurrent sessions. A number of the papers are expected to be of interest to the confectionery industry.

• **The Packaging Institute's Thirteenth Annual Forum,** October 22-24, at the Hotel Commodore, New York City, will take up the problems of military packaging, government controls, package and container evaluation and packaging standards. The annual fall forum does not contain exhibits.

• **The National Automatic Merchandising Association** will continue its service activities as they are, but will emphasize legislation and public relations. This was the conclusion reached at a meeting of the executive committee of N.A.M.A.'s board of directors. The meeting was held August 21-22, in Chicago, to discuss association policy.

• **The National Candy Wholesalers Association** is drawing up plans for its annual convention next May 18-20, at the Palmer House, Chicago.

FOR SALE—PIECEMEAL

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C. A. Briggs Co.

418 Main St., Cambridge, Mass.

Latest Type Desirable Candy and Chocolate Manufacturing Equipment

(due to the discontinuing of some departments)

At Tremendous Price Reductions

Equipment Can Be Seen in Operation

Chocolate Coating Department

1—24" Greer Coater with Bottomer and Freon Cooling Unit and Cooling Tunnel.
1—National Equipment 16" Enrober
5—2000 lb. National Equipment Chocolate Melters.
3—1200 lb. National Equipment Chocolate Melters.
2—300 lb. National Equipment Chocolate Melters.

Wrapping and Packaging Department

1—Stokes and Smith Model A Transwrap Machine, practically brand new.
1—Package Machinery Co. LP Sucker Wrapper.
1—Package Machinery Co. LP2 Sucker Wrapper.
2—Package Machinery Co. DF1 Wrappers, with electric eye.
1—Package Machinery Co. 22B Hard Candy Wrapper.

Moulding Department

1—National Equipment A. D. Mogul with 2 Depositors.

Approximately 8000 Starch Trays, standard size, with Starch.
2—Sugar Sanders.
1—Racine Starch Buck.

Chocolate Manufacturing Department

1—Jabez Burns #5 Roaster.
1—Jabez Burns Bean Cleaner.
1—National Equipment Cracker and Fanner.
1—Bausman Liquor Mill.
1—Lambert 3-Bag Roaster.
1—Racine Depositor with Sandvick Steel Belt, and nonpareil attachment.
1—500 lb. National Equipment Chocolate Melter.
1—300 lb. National Equipment Chocolate Melter.
2—Rockwell Jacketed Mixers, Single Arm, 500 and 1000 lb. caps.
1—Lehman 5 Roll Mill, 16" x 40".
1—6 ft. Lehman Melangeur.
1—Double Width Bramley.
2—Bramley Chocolate Refiners, 1200 lb. caps.

Lozenge Department

1—24" Mikro Pulverizer.
2—Lozenge Mixers.
2—Lozenge Machines, with Drying Conveyors.
1—Lozenge Machine for making Cigarettes.
1—Lozenge Cleaner.
2—Lozenge Assembly Machines.
1—Syntron Vibrator.

Hard Candy Department

1—Berks Batch Mixer.
2—Racine Model H Die Pop Machines.
2—Batch Rollers.
1—3' x 8' Cooling Slab.
1—Hildreth Form 6 Double Arm Puller.

Cream and Marshmallow Department

2—110 gal. Savage Marshmallow Beaters.
1—Burkhardt 50 gal. Double Arm Mixer.
3—150 gal. Steam Jacketed Kettles.
3—Steam Jacketed Kettles, 100, 60 and 40 gal. caps.
2—Werner 600 lb. Syrup Coolers.
1—Werner 50" Cream Beater.
2—50-gal. Cream Breakers.

Miscellaneous

1—Amsco Bag Filler.
Motors, Factory Trucks, Steel Lockers, Belting, Shafting, Pulleys, Scales.

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UNION CONFECTIONERY MACHINERY CO., INC.

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Confectionately Yours

"THIS IS it; give me the folding money," a young bandit told a Fresno, Calif., liquor store owner recently.

"All I have is in the cash register," the owner replied. "Only about $30 or $40. You don't want to go to the penitentiary for that. You'd better forget it."

"If I forget it, will you?" asked the youth.

"Sure," the owner said.

The young man held out his hands. He was trembling and had no weapon. "Can I have a candy bar?" he asked.

The owner handed him a candy bar and he ate it.

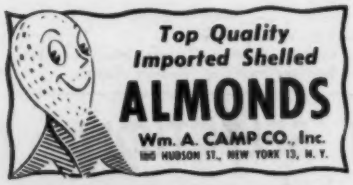
"I'm glad you talked me out of something I would have been sorry for later," he said. A customer entered just then and the youth left.

A "HALF-PINT" bandit with a yen for sweets was sought by Upper Darey, Pa. police.

Eight-year-old Marcella McLaughlin told police a boy about 10 years held her up with an air rifle as she returned home from a grocery.

"This is a stickup," she quoted the young thug. "Give me your candy and money."

Marcella said the boy took the candy cane she was eating and 16 cents change from her store purchases. He ignored the bag of groceries she carried.



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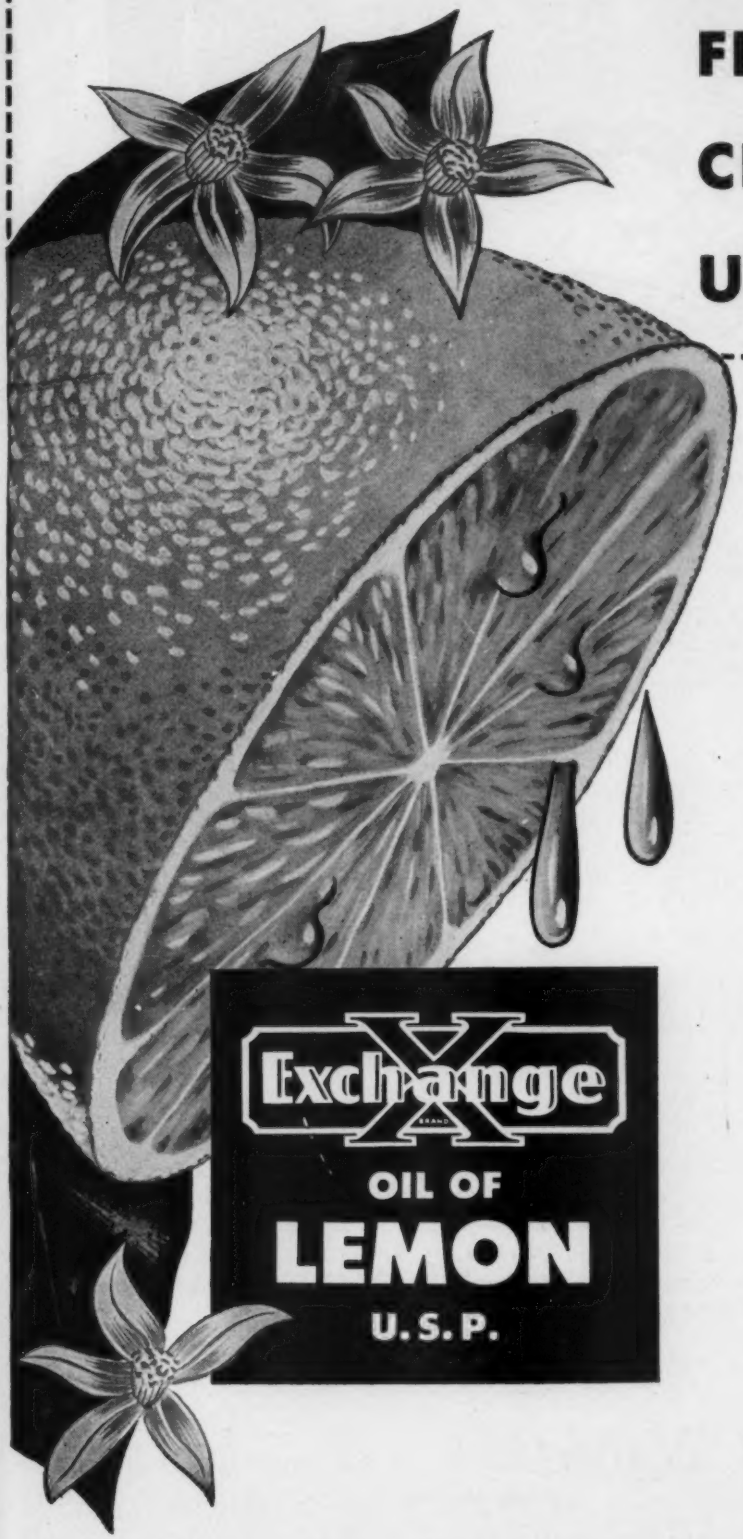

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This overwhelming endorsement by the trade is your guarantee that Exchange Lemon Oil delivers *quality*... quality in the form of superior *flavor* and unmatched *clarity* and *uniformity*.

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Norda puts a lot of extra goodness into NORDA BUTTERSCOTCH FLAVOR. You can taste the butter-richness. Everyone seems to like it.

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